REDACTED BY ORDER OF THE COURT

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

PACKET INTELLIGENCE LLC	)(	CIVIL DOCKET NO.
	)(	
	)(	2:16-CV-147-JRG
	)(	
	)(	
VS.	)(	MARSHALL, TEXAS
	)(	
	)(	
	)(	
SANDVINE CORPORATION AND	)(	NOVEMBER 6, 2017
SANDVINE INCORPORATED ULC	)(	12:45 P.M.

TRANSCRIPT OF JURY TRIAL

BEFORE THE HONORABLE JUDGE RODNEY GILSTRAP

UNITED STATES DISTRICT JUDGE

APPEARANCES:

FOR THE PLAINTIFF:
Mr. Paul J. Skiermont
Ms. Sadaf R. Abdullah
Mr. Steven K. Hartsell
Mr. Alexander E. Gasser
Mr. Steve J. Udick
SKIERMONT DERBY LLP
2200 Ross Avenue
Suite 4800W
Dallas, Texas 75201

COURT REPORTER:
Ms. Shelly Holmes, CSR, TCRR
Official Court Reporter
United States District Court
Eastern District of Texas
Marshall Division
100 E. Houston Street
Marshall, Texas 75670
(903) 923-7464

(Proceedings recorded by mechanical stenography, transcript produced on CAT system.)

FOR THE PLAINTIFF: Mr. William E. Davis, III
THE DAVIS FIRM, PC
213 N. Fredonia Street
Suite 230
Longview, Texas 75601

FOR THE DEFENDANTS: Mr. Gil Gillam
GILLAM & SMITH
303 South Washington Avenue
Marshall, Texas 75670

Mr. Eric A. Buresh
Mr. Mark C. Lang
ERISE IP, PA
6201 College Boulevard
Suite 300
Orland Park, Kansas 66211

Mr. Abran J. Kean
ERISE IP, PA
5600 Greenwood Plaza Boulevard
Suite 200
Greenwood Village, Colorado 80111

****

P R O C E E D I N G S

(Jury out.)

COURT SECURITY OFFICER: All rise.

THE COURT: Be seated, please.

All right. Ms. Abdullah, you may return to the podium so that when the jury is in their place, you can continue with your direct examination.

And, Mr. Nance, if you'd bring in the jury, please.

COURT SECURITY OFFICER: All rise for the jury.

(Jury in.)

THE COURT: Welcome back from lunch, ladies and gentlemen. Please have a seat.

We'll continue where we left off at the lunch recess, and that is with the Plaintiff's direct examination of the witness.

Ms. Abdullah, you may continue.

DR. KEVIN C. ALMEROTH, PLAINTIFF'S WITNESS, PREVIOUSLY SWORN

DIRECT EXAMINATION (CONTINUED)

BY MS. ABDULLAH:

Q. Dr. Almeroth, before the break, you told us about the patents traffic classification benefits. Would you now please describe for the jury some of the benefits in the patent that are related to quality of service?

A. Certainly. There's a description in the patent around Column 4, Lines 14 through 19, and it reads in part: Another aspect of the invention is determining quality of service metrics based on each and every packet.

And so part of what that's describing is the ability to look at not just packets and not just flows but to be able to relate flows to each other and determine things like quality of service, like how good

the video is that's being received.

Q. Can you also describe for us the benefits related to network security that are in the patent that you mentioned?

A. From the patent, PTX-7, Column 8, Lines 26 through 32, what it's describing there is the ability to efficiently recognize future packets associated with the same conversational flow.

And the benefit of that is you can make decisions about security. Security has become much more important recently, and it's become important to identify flows that are malicious, that are bad flows that are attempting to attack a network or steal information as quickly as possible.

Q. Now, when you were doing your analysis comparing the patents to the Sandvine PT -- PTS products, what was the method that you used in evaluating that?

A. So I have a demonstrative on this. This is the same methodology slide I went through in detail later -- sorry, earlier.

I looked at the patents and the claim constructions and information about the patents, and then ultimately compared it to the whole series of documents and source code that I had available about the

PTS products.

Q. And before we talk further about the PTS products, can you please tell us exactly what is a claim of a patent?

A. Certainly.

THE WITNESS: Ms. Vogtman, if you can help me get to Slide 32.

A. This is Claim 19 of the '789 patent, and it's at the end of the patent, and the numbered claims, and it lists a number of -- of requirements or elements or limitations. And so when determining whether or not there's infringement, you have to look at each and every limitation, and you have to look at each and every word of the limitation to understand what it means and what kind of system it would cover.

And so part of my analysis is comparing those words and limitations of the claim to the accused system.

Q. (By Ms. Abdullah) And so how do you figure out what the different words that are in this claim paragraph mean?

A. There's two ways. One is you can use the Court's claim construction. And so there's a process that the parties go through to determine what the meanings of certain terms are. And that's what's called

the claim construction.

Q. And do you have to use the claim construction of the Court for your analysis?

A. Yes, it is an absolute requirement.

Q. And if there's a term that the Court has not given a definition for, how do you interpret that?

A. You interpret that through the eyes of what's called a person of ordinary skill in the art. It's a hypothetical person from that time that you look at what those terms would mean to that person.

MS. ABDULLAH: And if we could go to the slide right before this one with the claim construction.

Q. (By Ms. Abdullah) What is that first claim term over there under the left column?

A. The -- the claim term is a "flow-entry database."

Q. And how did the Court define that data -- that flow-entry database?

A. It says it's to be interpreted as a database configured to store entries, where each entry describes a flow.

Q. And does the patent talk about what a flow is?

A. It does. It has a description of what -- what a flow is in several places.

MS. ABDULLAH: And if we could pull up

PTX-9, the '789 patent in the juror notebook, and take a look at Column 12, Line 11, and blow up that portion.

Q. (By Ms. Abdullah) Is this one of the parts of the patent that talk about what a flow is?

A. Yes.

Q. And can you describe for the jury, please, what this tells us?

A. Sure. This says a flow is a stream of packets being exchanged between any two addresses in the network. And then for each protocol, there are known to be several fields, such as the destination or the source, I described that as some of the information on the outside of the envelope earlier.

There are other fields that are important for identifying the flow, but they can become part of the flow. And I think that this is consistent with the definition elsewhere in the patent where the flow is the one connection, the single connection.

MS. ABDULLAH: And if we could go back to your demonstrative slide with the claim constructions.

Q. (By Ms. Abdullah) Here where it says flow-entry database, as defined by the Court, is that database storing flows, or is it conversational flows?

A. It's storing flows, connection flows.

Q. And how do you know that?

A. Because of the definition that the Court instructed us to use, it's a database configured to store entries where each entry describes a flow, and that flow is, as it's described in a patent, as a connection flow.

Q. Now, does the patent talk about the relationship between connection flows and conversational flows?

A. It does.

MS. ABDULLAH: If we could go back to the '789 patent, and this time we'll look at Column 3, starting at Line 56.

Q. (By Ms. Abdullah) Is this one of the parts of the patent that talks about that relationship?

A. Yes, it is.

Q. And can you tell the jury, please, what this tells us about the relationship between connection flows and conversational flows?

A. Yes. What this says is what distinguishes this invention from prior art network monitors is that it has the ability to recognize disjointed flows as belonging to the same conversational flow.

In other words, you have a database of connection flows that are just specific to connections, and a conversational flow is the ability to recognize

those disjointed flows as being related to each other.

So in the example I gave with Netflix, where you had the two separate video streams that you wanted to relate together as a conversational flow, the patent has a mechanism that describes how to do that.

Q. Were you in the courtroom this morning when Mr. Buresh talked about the rice analogy, the bag of rice?

A. Yes, I was.

Q. Did you think that was an accurate analogy?

A. No, not comparing what the invention was.

Q. Can you explain that, please?

A. Sure. It -- it seemed that his analogy was based on that what the invention describes is a single conversation flow that takes all of the information from all of the hundreds of connections related to loading a Facebook page, I think was his example, and to say that that was one entry, that the message -- what wrapped around all of those flows and made it a single thing. And I don't think that that's an inaccurate -- an accurate analogy with respect to the patent.

Q. And why not?

A. Well, really what the patent describes is those individual pieces of rice, those are the connection flows. That's what goes into the -- the

database.

Now, you have conversational flows that relate those to each other. That's the mesh that surrounds the rice and binds it. You still have individual pieces of rice, but the mesh is what connects the disjointed flows together.

So while you have a database in the patent of connection flows, there's an ability to relate those to each other so that you can gain all of the benefits of the patent.

Q. Now, a few minutes ago, you mentioned a person of ordinary skill in the art. What exactly does that term mean?

A. That term is about a person who you view the patent through, that when you read the patent, you look through the eyes of that person. And it's important to understand what that person's skill level is, what knowledge they had, because it's to that person that the patent is written.

So if you -- my understanding what the patent is, it's disclosing what they invented so that others could use it, but for the period of time they have to license the technology. So you look at the patent specification through the eyes of a person of skill in the art to understand what they would understand about

what it's describing about the invention.

Q. And so for the purposes of this case, what kind of qualifications would a person of ordinary skill in the art have?

A. That's this next demonstrative. It would be a -- a Bachelor's degree in computer science or engineering or the equivalent, and then several years of experience in the field of network monitoring technology.

Q. Now, is this a real person that you have in mind when you're thinking this through?

A. No, it's a hypothetical person, just to get a judge for what the skill level of that person would be.

Q. And can it be an expert in the field?

A. No, not an expert, just a person of ordinary skill.

Q. Now, can you briefly describe for us the Sandvine products that you were asked to analyze to determine whether they infringe the Packet Intelligence patents?

A. Yes. So I've shown a picture like this before. It includes the different accused products that together form the PTS accused products. It's the PTS 22000, 32000, 24000, 14000, and then also the PTS virtual series products.

Q. And what is your understanding of how these different models of products are different from each other?

A. They're different from each other with respect to the number of what are called ports, what are interfaces, how many different network connections that they can have. And so there's different sizes of devices. They can have different numbers of ports. It can handle different speeds of packets. They're -- they're different heights, but fundamentally, with respect to the analysis I did, they were all similar.

Q. And how do you know they were all similar for the purposes of your analysis?

A. They were similar based on the testimony of Mr. Bowman. I think he was mentioned in the opening. He's the chief technology officer of Sandvine. And during his sworn deposition testimony as the corporate representative of Sandvine, he testified that the aspects related to the PTSM and PTSD are extremely similar. And those are two of the components within all of the accused PTS products that I focus my infringement analysis.

Also, he said that the concept of the PTSM, the flow table that they have in the accused products, the LTIP, which is the trackers and analyzers that they

use for protocols, and the PTSD are the same across all of the accused products.

Q. So for the purposes of your analysis, were all of the features that are relevant to the patent claims the same across the different versions?

A. Yes, that's correct, based on Mr. Bowman's testimony.

Q. Now, can you tell us in a general way what these PTS products do on a network?

A. Sure. The next demonstrative I have is from a document, PTX-347, and it refers to the Policy Traffic Switch, which is the PTS that -- that I've been talking about. And it provides a platform overview.

So these are -- are customer-facing documents that generally describe what the functionality of all of these devices are. So you see up here at the top, it says: The PTS is a required component of Sandvine's Network Policy Control architecture and interacts directly with data traffic by enforcing policies on a per-flow and per-subscriber basis.

So it's receiving packets on the network and it's able to -- to monitor those.

Under Traffic Classification, it talks about measuring and identifying traffic characteristics, and it makes this information available to the Sandvine

policy engine for real-time network policy control. And then it includes some of the different information that can be collected from some of the records and packets.

So it's describing a device that can fit into a network and collect packets and understand information about the packets and then the flows and the applications and conversational flows.

Q. And can you show us where on the network these devices fit in?

A. Yes. The next demonstrative is a figure from a different exhibit, PTX-362, and there's a figure at the bottom of this page that I've blown up here. And it shows servers in a network on the right, a core network in the middle, something like the Internet, and then these are what are called access networks, like for TVs in your home, wireless for your iPhones and tablets, and then in potentially office buildings for PCs.

And it shows that the PTS products can be located in -- in the links between those networks so that it can see the traffic going between the client user devices and then servers across the network.

Q. Now, earlier, you pointed us to Slide 32 which shows Claim 19 of the '789 patent.

Did you apply your methodology to analyze whether the PTS products infringe this Claim 19 of the

'789 patent?

A. Yes, I did.

Q. And can you explain how you analyzed that claim?

A. Certainly. What I did was it's a long claim. There's a lot of words. It has a number of requirements. And what I did is I broke the claim up into limitations, and then I used the evidence that I had available to me to determine if each one of the limitations were present.

I looked at the words of the limitation and compared them to the documents and the testimony about the Sandvine accused products and determined whether each limitation was present.

Only if each and every limitation is present for all of the limitations of the claim is there infringement.

Q. So then beginning with the very first part of Claim 19, did you determine whether the features of that preamble are present in the PTS products?

A. Yes, I did.

Q. And what evidence did you look at to determine that?

A. So what I've done in this slide is I've shown the -- the claim here on the right side, and I've

divided it up into limitations with blank boxes to the right of each limitation.

In this case, I've highlighted the preamble of Claim 19. Let me read it. It says: A packet monitor for examining packets passing through a connection point on a computer network, each packet conforming to one or more protocols.

So it's a packet monitor that's able to connect to a network and then monitor packets. And so I looked at the corresponding evidence from Sandvine to see if that limitation was present.

What you see here is from PTX-347, and it has this similar kind of image down here at the bottom that shows the network -- or the network with servers and places where you can do the monitoring, and then connections to end user devices.

So based on this document, in part, I was able to conclude that this limitation was met.

I looked at a whole series of evidence. I'm only presenting a sample of the documents here to show that this limitation is met.

Q. And so for this limitation, in addition to what you've shown us here, did you see other evidence that that limitation is met?

A. Yes. So the next demonstrative is from --

shows a blow-up from PTX-360, and this is a document that describes the different models of devices here, and what's important in particular is that it talks about its network interfaces and the fact that it uses Ethernet as a protocol for accessing the network, and that is the ability to connect to the connection point. So that's further evidence that I've relied on.

There's another piece of evidence from PTX-350, and this is for the Policy Traffic Switch document. It talks about that it's a platform for policy control, that it does so based on measurements that it collects, and that it's also able to do protocol and application detection.

And this last one is important because it says: Accurate traffic identification is the foundation on which all other PTS functions are built. The PTS identifies more than 500 individual protocols, things like FTP or HTTP, as well as applications. And it identifies BitTorrent. And services, some things like Netflix and YouTube.

It also says that new protocol packs are released every month. So this is a device that can recognize protocols, packets, create connection flows, and then relate those connection flows together in the concept that the patent calls a conversational flow.

Q. So based on all of this evidence that you've described to us, do the PTS products meet the limitation that is shown in that preamble of Claim 19?

A. Yes.

Q. So can you check the box next to it?

A. Yes.

Q. Have you also formed an opinion on whether the second limitation there, 19(a), is met by the PTS products?

A. Yes, I have.

Q. And what evidence did you look at to form your opinion?

A. For this limitation, it's a packet acquisition device coupled to the connection point and configured to receive packets. Many of the words are the same. The concepts are the same in the preamble. So I looked for evidence to make sure all of the words of the limitation were met.

It includes PTX-360 that I showed previously. There's also testimony from Mr. Bowman in his deposition transcript on Page 52, Lines 5 through 12. He's describing that there's an external interface transceiver, a transmitter and receiver, that's the thing that connects to the network.

So then you have a data interface where

packets from a consumer on the way to the Internet and in the reverse path can be received by this device and then processed.

There's one other document that I relied on for this limitation. And I think that was it. Sorry.

Q. So based on the evidence that you considered, do the PTS products meet that limitation of Claim 19(a)?

A. Yes, they do.

Q. So can we check that box?

A. Yes.

Q. Now, moving to Claim 19(b), the next part, did you consider whether the Sandvine PTS products meet that limitation?

A. I did.

Q. And can you describe for us what evidence you looked at in arriving at your conclusion?

A. Sure. This limitation is for an input buffer memory coupled to and configured to accept a packet from the packet acquisition device.

So now we're moving further into the process. We have this device that connects to the network, and now it has to accept a packet for processing. And it stores that packet temporarily in a buffer in memory in the device.

So the evidence that I've relied on for this

one is from PTX-334. That has a figure in -- in it that includes this PTSD and the PTSM. And there's a description down here about what the PTSM gets from the -- the interface. And so it says the PTSM gets packets from the network interface card, that Ethernet card that connected it to the network, and it's able to process those packets.

So that's the -- the first piece of evidence I relied on that the device is receiving these packets and processing them.

There's a second document, PTX-326, that describes some of the internal components of these accused devices. And one of the upgrades that they're considering in this new product is more packet buffering.

So given what Mr. Bowman said that all of the -- the products work in essentially the same way, and you have packet buffering, that that's additional evidence that supports this limitation.

There's one other piece of evidence that I relied on. It's from PTX-366. This is for the -- the NVM version. And it says up here that you have an interface card that places the packet directly in the socket RAM from which you can then do processing.

And I've highlighted that here, and that's

also an input buffer memory.

Q. So based on this evidence that you've spoken about, were you able to determine whether the PTS products matched that limitation?

A. Yes, I was.

Q. And do they?

A. They do.

Q. Are you able to check that box?

A. Yes, ma'am.

Q. Moving to the next part of the claim, 19(c), did you consider whether the PTS products meet that limitation?

A. Yes, I did.

Q. And what evidence did you look at when you were considering your opinion?

A. For this limitation, we're moving further and deeper into the process now, and you have what's called a parser subsystem, and it's coupled to the input buffer memory. It includes something called the slicer, and it's able to extract selected portions from the accepted packet.

What that means is you're processing the packet to determine the fields in the individual header. It's almost like in the U.S. mail, you're taking the address, and you're separating it out into the name, the

street, the street number, the city, the state, the zip code.

And you do that including this -- the system that's described as a slicer. It extracts important packet elements from the packet. Based on this information, you'll then go through the next step of processing. But for the parser subsystem, I relied on Exhibit 334, I showed it previously.

Down here, you have the packet coming in, the PTSM gets that packet, and it has its own processors for protocols like IP, TCP, and UDP. So that's where it's doing the kind of parsing of the packet headers and protocols to get that information.

There's one other piece of evidence that I want to show, and that is the source code. So these are the computer instructions that are operating on the machine that I use to tell me what it's doing and where this parsing subsystem is happening.

This is from PTX-113, and it's in a file that describes the flow look-up. And what's important in these lines that I'm showing, 45 through 46, and 85 through 87, is that when you're looking up those packet headers to see if it matches with the flow, it's using all of this kind of information.

So a little bit more. There's a function name

called find_state, and it's using the IP address, it's using the source port, the destination port, and that's all information that comes from processing the headers as part of the parser subsystem.

Q. And where does that source code come from that you've been showing us?

A. That is source code produced by Sandvine, and it's the source code that runs on the accused products.

Q. So based on that evidence that you've shown us, were you able to determine whether the PTS products meet the limitation that's described in 19(c)?

A. Yes, I was.

Q. And do they meet that limitation?

A. They do.

Q. So based on that, can we check the box next to 19(c)?

A. Yes, we can.

Q. Now, did you also consider whether the PTS products meet the limitation of 19(d)?

A. Yes, I did.

Q. And what did you look at when you were considering your opinion in that regard?

A. This is the limitation that says a memory for storing a database comprising none or more flow-entries for previously encountered conversational flows, each

flow-entry identified by identifying information stored in the flow-entry.

So now we're at the level of storing information in a flow-entry database for flow-entries for previously encountered conversational flows. Now, the important part of this claim is that it's a memory for storing a database, and it has to comprise none or more flow-entries from previously encountered conversational flows.

So I've broken up my analysis, and the first thing that I looked for was where the accused products store flow-entries.

Q. And what other evidence did you consider in that regard?

A. So the first evidence I looked at was from testimony from Mr. Bowman, and he's describing the process of what happens after the packet has been parsed into its pieces. And now the accused products are trying to see if it matches with an existing flow or whether it's a new flow.

So think about the millions of flows coming through the device, millions of packets. Each time one comes in, you're trying to see if it's part of the flow or if you have to create a new flow.

So Mr. Bowman testified and said: A flow

record is always created in our system, so every time a packet comes in, it looks it up in the flow table. If it did not exist, it creates it every time.

So either a packet comes in for an existing flow that already exists, or it's a packet for a new flow that doesn't exist, and then it creates it.

He describes that flow record table as a set of columns, and the columns are stored in a memory. It's part of the PTSM, and it's stored in the kernel memory. And there's records associated with that flow-entry that are stored in the memory and can be accessed by other parts of the device.

So I looked at his testimony first. If I go back to Exhibit PTX-334, that's more evidence that I relied on. You see the processing of the flow to create the flow-entry in the PTSM. And so it talks about how the PTSM gets the packet from the network card. There's slow memory here, and then eventually, this second device, the PTSD will be able to access that memory for things like flows.

So that was part of the information I relied on, as well.

Q. Did you rely on any source code in connection with this limitation?

A. I did. So this next demonstrative shows

source code from PTX-113. It's the Sandvine pts_flows.h -- svpts_flows.h. And it's describing the portion of the source code where it defines what the flow record is. It defines what the entries for the particular flow are that are stored in the memory. And the name of that particular structure is called ptsFlowRecord. That includes information, variables in the computer program where it takes information that came in and stores them in the variables.

And this ptsFlowsRecord data structure is this big long list of information, including optional information, that can store flow-entry information and help -- help the device use that flow-entry to classify traffic.

Q. Was there additional documentary evidence that you looked at in considering this claim limitation?

A. There is. There's the one other piece of source code which is this record -- ptsFlowRecord.h. I looked at that and saw all the data structures and the information that it stores for each particular flow.

Q. Were there any Sandvine documents that informed your opinion?

A. Yes. Now, that I've talked about the memory for storing, what I want to talk about is the mechanism that Sandvine uses to relate those flows to each other.

It's got a database that stores the flows. I've shown that in the evidence so far. And now I have to show that those are for flows for previously encountered conversational flows.

So when it creates new flow-entries, it related them to previous flows that it already saw. And the way that that happens in the accused products is through something called priming and tracking an analysis.

So PTX-381 describes some of this functionality. When a flow comes in, it either creates a new flow-entry or uses an existing one. It then does some additional analysis of that flow and determines that there might be future flows that are related to that flow. It's like priming the pump. By looking at one flow that comes in, like a request across the web for traffic, I can determine if there might be a future flow. And that's what priming is.

It accomplishes priming through this process of tracking. So the documents say that priming is the act of pre-creating a flow state within the PTS devices based on a known 5-Tuple. That's some information from the existing flow. That also means that prime flows will be acted upon based on the first packet.

Now, you -- you can identify what that

functionality is through what's called a tracker. And I'll pause there and let you ask a follow-up question.

Q. Can you explain a little bit more how trackers work in the Sandvine system?

A. Sure. The accused products are doing more than just parsing and recording the information into packets. They're looking at that information to determine if, for example, it's a request. If it's a request, then it's expecting a response. And in some cases, the response comes in as a separate connection. And that's the whole point of the invention in the accused products, to have these different connections that can be related to each other.

So by analyzing the data, by looking at the tracking inside of a particular packet, you can associate it with another flow that might happen in the future. And the flow that happens in the future, when it does come, is related to the first flow that created that priming entry.

So tracking is a technology which builds a state machine, trying to understand what's in the data itself, to continuously parse to extract all the necessary protocol information, to accurately detect and characterize the flow.

And it says the most common application of

Sandvine's tracker technology is to find data plane connections for multi-flow applications. It's using trackers and priming to correlate the different entries in the database to each other, to tie that mesh around the different grains of rice.

Q. Were there other Sandvine documents that you looked at that described this associating flows together?

A. Yes. The next one is PTS-327 (sic). You see the PTSD. There's -- it's talking about the priming infrastructure here, so it's talking about the same thing I just talked about. And it says: The existing prime infrastructure improved our protocol recognition by correlating a flow without a clear signature, without knowing what application it was for, to a recognized flow.

So a flow that wasn't recognized to a flow that was using certain flow properties and classification conditions. By now knowing about the unknown flow, by relating it to another flow, you gain a very significant degree of understanding about what the packets and flows and conversations and protocols and uses are going on across a particular network plane.

Q. Did you review any other documents that came out of Sandvine's files that informed your opinion on

this one?

A. Yes, I did.

Q. Can you describe that, please?

A. Sure. There is an email here that talks about flow priming again. And what's useful about this document is the characterization of flow priming as behavioral information. So the idea that flow priming and relating flows to each other is a way of tracking what the user behavior information is.

And so they've linked that functionality with that feature of their accused devices.

Q. And was there additional source code that you looked at that, again, referred to this flow aspect?

A. Yes.

THE WITNESS: Ms. Vogtman, if you could help me go to Slide 57. I think that's the right one.

A. This is source code from PTX-113, and it talks about what the flow characteristics are, and it's that flow characteristics that end up getting related to each other as part of the conversational flow aspect in the -- the priming and tracking functionality.

MS. ABDULLAH: Ms. Vogtman, if you could bring up Defendants' opening Slide 12, please. I'm sorry, it might be before this one. If we could skip back a few slides. That one is perfect, the one after

this. Thank you.

Q. (By Ms. Abdullah) Now, Dr. Almeroth, were you in the courtroom when Sandvine's counsel used this slide?

A. Yes, I was.

Q. And how in the context of the flow-entries that you've been talking about with respect to this claim limitation, how does this show how a conversational flow might exist?

A. Well, what this would show is that there are separate connection flows, which is what Sandvine is doing. But in order to create these connection flows and to give them meaning, they've related these connection flows to each other using the priming, the tracking, and the analysis process that I described. Sandvine is relating these connection flows and creating a conversational flow based on the relation of these connection flows.

Q. And when Sandvine does that, what does that allow them to know about Bob's phone?

A. That allows them to know in this particular case that all of these separate connections are related to each other, that they're all part of the same user activity. And that can happen because one flow creates a priming entry that eventually becomes a flow. There's

a relationship in the accused products between flows. It's not shown here, but it's in the accused products.

MS. ABDULLAH: Now, if we can go back to your Slide 57.

Q. (By Ms. Abdullah) Based on all of this evidence that you've discussed and considered, did you form an opinion as to whether the PTS products meet that highlighted claim limitation?

A. Yes, I did.

Q. And do they, in fact, meet that limitation?

A. They certainly do.

Q. Can you check the box, please?

A. Yes.

Q. Now, for the next limitation, 19(e), did you consider whether that is met by Sandvine's PTS products?

A. Yes, I did.

Q. And what type of evidence did you look at for that limitation?

A. For this limitation, I looked at PTX-334. What this limitation is about is a look-up engine coupled to the output of the parser, and it's basically trying to determine whether a packet that's coming in is for an existing flow or whether it's for a new flow. And so that is shown in PTX-334.

The parser was down here. That functionality

of doing the look-up happens inside of the PTSM, and I relied on this document to be able to show that.

There's also source code that describes this functionality. This is back to that flow_lookup.c. from PTX-113.

And it's describing two different functions, find_state and create_state. And those get called when packets arrive, and those are the -- the source code that perform the function to determine whether or not a packet is for an existing flow or whether it's the first packet for a new flow that doesn't have a flow-entry yet created for it.

Q. So based on that evidence that you considered, can you check the box next to that limitation?

A. I can.

Q. And what does that mean with regard to your opinion as to that limitation?

A. That this limitation is met by the PTS accused products.

Q. Did you also consider whether the PTS products meet Limitation 19(f)?

A. Yes.

Q. What evidence did you look at for that?

A. I started with testimony from Mr. Bowman. This was some testimony that I showed earlier.

Limitation (f) is the flow insertion engine. This is the portion of the claim where based on what the look-up engine determined it now either creates a flow or adds the packet to the existing flow.

And those words basically get at that concept. So for Mr. Bowman on -- in his deposition, Page 107 Lines 2 through 5, he said essentially the same thing: A flow record is always created in our system, so every time a packet comes in, it looks it up in the flow table. If it doesn't exist, it creates it.

And this is confirmed by source code, as well. Some of this source code I already showed. This is that same flow_lookup.c file.

Here what it's showing is searching through all of the existing flow-entries to determine if there is a match. If there's not a match, the next portion of the source code says that this is now a new flow record. It says from this point, where we -- on, we're actually creating and configuring the new flow record. So one wasn't found. The source code in all of these computer instructions are going through and creating the new flow record.

Q. Based on all of that evidence, did you form an opinion as to whether the PTS products meet Limitation (f) of this claim?

A. Yes, I did.
Q. And do they?
A. They do.
Q. Are you able to check the box next to that limitation?
A. Yes, I've now checked it.
Q. Now, for that last short limitation that's on the page there, did you consider whether that one is met by the PTS products?
A. I -- I did.
Q. And what evidence did you look at for that?
A. This limitation says wherein the operation of the parser subsystem depends on one or more of the protocols.

So this is back to the protocols -- the parser subsystem which was below the PTS. And if you look at the source code, and I showed the source code earlier, where create_state gets called, it's -- it's a function that gets called, and it passes it all of this information. And I pointed out the IP packet, the destination port, the source port as just some of that information.

All of that information came from the parser, and that parser was working on protocols like IP and TCP. So that shows that that limitation for the parser

subsystem is using existing protocols is met.

Q. Based on that evidence, did you determine whether that last wherein limitation is met by the PTS products?

A. Yes.

Q. And does that mean you can check the box?

A. Yes, ma'am.

Q. And what does that mean with respect to your opinion?

A. So now we have all of the -- all of the limitations checked. I've shown the analysis that I went through and some of the evidence that I've relied on as part of my analysis to show that each limitation of Claim 19 of the '789 patent is in the accused PTS products.

Q. And so to summarize, is Claim 19 of the '789 patent infringed by the Sandvine products?

A. Yes. Based on all that analysis, I can put a check box by all of Claim 19 for the '789 patent for the PTS products.

Q. Now, at the beginning of your testimony today, you also mentioned that you were asked to offer an opinion as to whether those PTS products infringe Packet Intelligence's '751 patent; do you remember that?

A. I do.

Q. And how did you analyze infringement with respect to that patent?
A. I used the same methodology that I used with respect to Claim 19, divided that claim up into limitations, and then looked for evidence to determine whether or not there was infringement of each of the limitations.
Q. And so did you consider whether the PTS products meet every limitation of Claim 1 of the '751 patent?
A. Yes.
Q. And did you consider some of the same evidence that you looked at with regard to Claim 19 of the '789 patent?
A. Yes, I did.
Q. So how did you start your analysis?
A. I started my analysis by lining up Claim 19 of the '789 patent by Claim 1 of the '751 patent and noticed that there were some similarities in the limitations. And I determined whether or not I could use the same evidence as part of my analysis of this new claim, this Claim 1 of the '751 patent.
Q. So how did those similarities inform your opinions?
A. I was able to use the same evidence from Claim

19 of the '789 patent, from Limitations (a) and (b) of Claim 19, that same evidence to demonstrate that the preamble of Claim 1 and Limitation (a) were present in the '751 patent.

Q. Now, how is this Claim 1 of the '751 patent different from Claim 19?

A. Claim 19 is what's called an apparatus claim, and so it covers the physical device and the capability to perform the functions that are identified within the limitations.

Claim 1 of the '751 is what's called a method claim. And it describes -- its limitations are a set of actions. It's receiving, and it has other verbs. It's looking up. And so those are the limitations of Claim 1 of the '751 patent.

So despite the fact that it's a method claim, I'm still relying on the same evidence to see that the device is capable of performing those steps. And then when the device is used, it will perform those steps.

Q. Now, on the slide that you have up here, there's -- there are two checked boxes to the right next to Claim 1. What do those signify?

A. Those signify that those limitations, the preamble of Claim 1 in Limitation (a) of Claim 1 of the '751 patent I've already checked off. I won't go

through and reanalyze and show the evidence that I relied on from Limitation 19(a) and (b), it's the same evidence. I've concluded that the preamble in 1(a) are present in the accused devices for the same reasons I've already testified to.

Q. And did you consider, then, whether the PTS products meet the limitations that are not highlighted and checked off yet?

A. Yes. And there's a couple of other highlightings to check off, as well.

Q. And which ones would those be?

A. So the next demonstrative shows that for 1(b) of the '751 patent, most of it can use the same evidence from 19(d). I say most because there's this portion at the end here that says: A conversational flow further having a set of one or more states, including an initial state. I didn't present any evidence along those lines for Claim 19 of the '789 patent.

So while the rest of it I can check off because it's the same evidence I've already presented, I have to deal with that additional portion of the limitation using new evidence.

Q. And is there anything else you can check off based on the same evidence we've already heard about today?

A. Yes. This last part, the wherein clause at the end, all the way to the end of the claim. It talks about where -- wherein each packet passing through the packet acquisition device, consisting of Steps (a) and (b) above, includes identifying the protocol being used, and then also storing entries in the flow-entry database.

So if you look at the words of the requirement of the wherein clause, it uses the same evidence from Claim 19(a) and (b). So based on that evidence, I can already go -- go ahead and pre-check that box.

Q. Now, you mentioned that one of the differences is -- has to do with state operations. Can you define that term for us?

A. Sure. State operations are the state of a -- of a flow-entry, the state of processing of it. There can also be a protocol state, but the state for a flow-entry or a conversational flow can be how far it's been processed. Is it the first packet that's been received? And so it has to go to a new processing step? Is it halfway through? Is it at the end of the connection? So there's state associated with a conversational flow that's required by the claim.

Q. So what was the first element here that's different in Claim 1 that you considered in your

analysis?

A. The first element that I had to consider was this second -- or the last portion of Claim 1, Limitation (b), where further having one or more states, that the conversational flow has one or more states, including an initial state.

Q. And what evidence did you look at when you were evaluating whether the PTS products met that piece of the limitation?

A. I relied on testimony from Mr. Bowman in his deposition transcript, Page 106, Line 16 through 24. He gave an answer that said: When a packet comes in, we look it up in the flow table, and we create it if it doesn't exist. If the flow table entry does not exist, we set the initial state to inspect it.

So that's the state that's used for the new flow-entry. It's the initial state.

There's an additional document, PTX-394 at Page 12. It talks about the different states that can be associated with flow-entries. Inspect is the first one. That's the initial one.

And then it also has additional states that can be attributed to the conversational flow and the flow-entries of that conversational flow.

Q. Based on that evidence, did you conclude

whether the PTS products meet that second part of the limitation?

A. I did.

Q. And do they?

A. They do. I will add the check box for the last portion, and now the entire limitation has been covered, based on this analysis and the analysis I described previously.

Q. Now, did you also analyze whether the PTS products meet 1(c) of the '751 patent?

A. Yes.

Q. And what evidence did you look at to determine that?

A. I'm looking at the source code again, so this is PTX-113 from a file called the AppRecognizerEngine. The application recognizer engine is the main source code that does the recognition. Within Lines 143 to 179, there's an example as part of the inspection result that happens that what you're looking to determine is that a match needs to happen based on subsequent analysis.

And so what you're looking for here is what the limitation requires where if the packet is for an existing flow identifying the last encountered state of the flow, performing any state operations associated --

specified for the state of the flow, and then updating the flow-entry. In other words, protocols as they work through the different steps will have different states associated with them, and the flow-entry, as it processes those different states, will have its own state associated with it.

So that's part of the evidence that I relied on.

Q. Did you also rely on any sworn testimony?

A. I did. There's a little bit more source code, also from PTX-113. Very briefly, what it describes here is that you're adding entries when you have protocols that are first being recognized. This is for a protocol called Gnutella. There's a protocol on the Internet called Gnutella. And you're adding entries, and that's for the initial processing of -- of that particular state.

Q. And what -- what is the deposition testimony that you've relied on?

A. The deposition testimony from Mr. Bowman is from his transcript on Page 107, Lines 19 through 21, and then Page 108, Line 23 through Page 109, Line 1. And he says that the LTIP, that's the -- the -- the set of protocol descriptions that are part of the analyzing and tracking, it has access to the flow record which as

the state inspecting, it looks at the flow index and has access to the packet. And then it also has the statistical measures.

So the point would be that the LTIP and the PTSD portion of the device, based on the state of the flow being set to inspecting, will then go and look more deeply into that packet and the flow.

The second part here is about statistics, having counters in the flow record for statistics. That's the last portion of this limitation where it says the existing flow-entry includes storing one or more statistical measures kept in the flow-entry.

Q. Based on that evidence and testimony, did you form any conclusions as to whether the PTS products meet Claim Limitation 1(c)?

A. Yes.

Q. And do they meet that limitation?

A. They do.

Q. Can we check off the box?

A. I just did, yes.

Q. Now, for that last remaining limitation, 1(d) of the '751 patent, did you consider whether that one is present in the PTS products?

A. Yes, I do.

Q. What evidence did you consider?

A. For this one, it's saying the packet is a new flow performing any state operations required for the initial state of the new flow, and then storing a new flow-entry for the new flow in the flow-entry database.

And, again, it has the statistical measures portion.

So for this one, the evidence that I relied on was the source code back to the AppRecognizerEngine.impl -- i-m-p-l -- for implementation.H from PTX-113.

And here what it's saying, again, is that based on the search result, and you get a different state, and based on the initial state for certain protocols, it will then perform the inspecting portion which will try and match up the protocol characteristics to the protocols that it knows about. And so that's described in that source code.

Q. So based on that evidence, were you able to conclude whether the PTS products meet Limitation 1(d)?

A. Yes, I was.

Q. And do they, in fact, meet that limitation?

A. They do.

Q. And you can check the box there?

A. Yes.

Q. So to summarize, what conclusions did you draw with regard to the '751 patent, Claim 1?

A. That through my analysis, all of the limitations were present in the accused PTS products that they perform when you use the PTS products. And for that reason, I believe that Claim 1 of the '751 patent is infringed.

Q. Did you consider any other claims of the '751 patent?

A. I did.

Q. Which one would that be?

A. Claim 5.

THE COURT: Let me interrupt here just a minute. Before we get into Claim 5, we're going to have to take a short recess. There's a matter I need to take up outside the jury's presence.

So, ladies and gentlemen of the jury, if you'll just close your notebooks and leave them in your chairs. Take this opportunity to stretch your legs and get a drink of water. Follow all my instructions, including not to discuss the case, and we'll be back in here shortly to continue.

The jury is excused --

COURT SECURITY OFFICER: All rise for the jury.

THE COURT: -- the jury is excused for a recess.

(Jury out.)

THE COURT: Counsel, I'm told we're having an audio problem somewhere in our system. Someone is here to look at it, so we're going to take about a five or 10-minute recess and let them check out our system. And then we'll be back on the record to continue. In the meantime, the Court stands in recess.

(Recess.)

(Jury out.)

COURT SECURITY OFFICER: All rise.

THE COURT: Be seated, please.

All right. Counsel, you may return to the podium.

The witness is in the witness box.

Let's bring in the jury, please, Mr. Nance.

COURT SECURITY OFFICER: All rise for the jury.

(Jury in.)

THE COURT: Please be seated.

All right. Counsel, you may continue with your direct examination of the witness.

Q. (By Ms. Abdullah) Dr. Almeroth, before the break, you told us about Claim 1 of the '751 patent.

Did you also consider whether the PTS products

meet the limitations of Claim 5 of the '751 patent?
A. Yes.
Q. And how did you go about analyzing Claim 5?
A. Using the same methodology I have for the other claims.
Q. And what kind of claim is Claim 5?
A. Claim 5 is what's called a dependent claim.
MS. ABDULLAH: So if we could go to the next slide.
Q. (By Ms. Abdullah) Is that Claim 5 up there in the right-hand corner?
A. Yes, it's highlighted.
Q. And when you say it's a dependent claim, what does that mean?
A. That means that it depends on a previous claim. In this case, it says a method according to Claim 1. So that means it has to meet all of the limitations of Claim 1, plus the additional limitation that's added by Claim 5.
Q. And is that the same Claim 1 that you checked all the boxes for a few minutes ago?
A. Yes, ma'am.
Q. And so what is the additional requirement of Claim 5?
A. The additional requirement is that further

includes reporting one or more metrics related to the flow of a flow-entry from one or more of the statistical measures in the flow-entry.

And so what it's described here in this document, PTX-379, is some of the statistics that can be made available as part of extracted data and presented to users of the system. So things like the number of bytes, the payload bytes, and all sorts of other information about the flows that can be reported to users.

Q. Is this a Sandvine document that you considered in connection with Claim 5?

A. Yes, it is.

Q. And based on this document, what did that tell you about that additional limitation?

A. That it was present in the accused PTS products.

Q. Are you able to check the box next to Claim 5?

A. Yes.

Q. And so to summarize, what was your opinion with respect to the two claims of the '751 patent that you considered?

A. That Claims 1 and 5 of the '751 patent were infringed by the accused FT -- PTS products.

Q. Did you consider any of the claims of the '725

patent were infringed by the PTS products?
A. Yes, I did, Claim 10.
MS. ABDULLAH: If we could pull up Claim 10 on the next slide.
Q. (By Ms. Abdullah) Is this the Claim 10 you were referencing in your prior answer?
A. Yes.
Q. And how did you go about analyzing Sandvine's infringement with respect to this claim?
A. Using the same methodology that I applied to the other claims I have presented testimony on.
Q. And so did you consider whether the PTS products meet every limitation of Claim 10?
A. Yes.
Q. How did you start your analysis of Claim 10?
A. I started my analysis of Claim 10 by comparing some of the limitations to Claim 19 of the '789 patent and determining that they were similar enough that the evidence that I relied on for the limitations from the '789 patent, that same evidence could be applied to my analysis for Claim 10 of the '725 patent.
Q. So can you tell us specifically which claim elements those were that you've already described for us today through your other analyses?
A. Yes. For Claim 10, the Limitation (a),

receiving a packet, that is something that I relied on the same evidence from Claim 19, the preamble, and Limitation (a) of the '789 patent.

For the -- the last portion of Claim 10, the last clause for the wherein where it talks about identifying the packet as belonging to a conversational flow. I relied on the same evidence that I did for Claim 19(d).

The one difference to note, though, is that Claim 10 just says identifying a packet as belonging to a conversational flow, and doesn't have any of the other requirements about storing a database comprising none or more entries for previously encountered conversational flows.

So the limitation is a little bit different, but the evidence they relied on for 19(d), I used that same evidence to conclude that Limitation -- the -- the last portion of the wherein clause of Claim 10 of the '725 patent was present.

Q. Were you able to check the boxes next to those two elements?

A. Yes, ma'am.

Q. What was the first part of the claim that's different from Claim 19 of '789 that you considered in your analysis?

A. The first part that's different is the preamble, but because the preamble requires all of the steps, I'm going to present the evidence for the rest of the steps before coming back and describing the preamble. So that would be Claim 10(b), and then there's a sub-bullet, little (i), that I'm going to offer evidence for.

Q. Did you consider, then, whether the PTS products include the limitations that are described in (b) and (i)?

A. Yes.

Q. And what evidence did you look at in that regard?

A. The first piece of evidence I looked at was PTX-354 on Page 32. Claim 10(b) requires receiving a set of protocol descriptions for a plurality of protocols that conform to a layered model and a protocol description for a particular protocol, including -- and then there's the three sub-bullets under it. So the protocol description has to have each of those three pieces.

These protocol descriptions are in something I described earlier where there was the 500 protocol descriptions that were being updated monthly. That's called the LTIP, the Loadable Traffic Identification

Package.

And what that document describes about the LTIP is that Sandvine continuously monitors new applications as they are released and adapted by consumers -- and I can't quite read it -- by customers so that future protocol package releases can be refined to support new and emerging protocols.

And so that LTIP is the load -- is the set of protocol descriptions. And now it includes three sub-points, and I looked at the first one first. It talks about having one or more child protocols that adheres to a particular layer of a protocol stack. And it talks about what the information is at that particular layer. And that's supported by the same document on the same page under Section 4.1.1 for the OSI model.

Q. Did you look at any other evidence with regard to these two elements?

A. I did. PTX-354 in a later portion of the document on Page 38 talks about how there's a relationship between protocols. There's a child and parent protocol relationship. It talks about the protocol and the keywords and the network demographics for each one of those protocols. And that's the kind of information about the protocol at the particular layer

that's required to exist in that protocol description.

Q. When you were analyzing these, did you also look at source code?

A. I did.

Q. And can you tell us what source code you looked at?

A. Sure. This is PTX-113 from the ProtocolManager.cpp file. And I have a callout from Lines 543 to 565.

And what this is describing at the top here is initializing the new protocol library. So it's loading that LTIP library of the 500 or more protocols that's updated monthly into the system so that it can use those protocol descriptions in processing packets that come through the accused products.

Q. Was there any other source code you looked at?

A. There was one other one, which is for an example called BitTorrent, which is another type of protocol that's used. And what these -- doMatch is doing is trying to match up some of the information from the LTIP database against entries and information in the flow-entry to see if it's a BitTorrent protocol and what other child flows might come about because of the BitTorrent protocol.

Q. Based on this evidence, did you form an

opinion as to whether the PTS products meet the limitations of (b) and (b)(i)?

A. Yes, I did.

Q. And what was your conclusion?

A. That they were present in the accused products.

Q. Does that mean you can check the box?

A. Yes.

Q. The boxes?

A. Yes, ma'am.

Q. Moving on to Claim 10(b)(ii), did you consider whether the PTS products meet the limitation in that part of it?

A. Yes.

Q. What evidence did you look at?

A. I looked at source code again, PTX-336. I relied on the general descriptions of the LTIP protocols. This source code is an example within BitTorrentRec.h, r-e-c for record. And what it describes is the -- the matching that's taking place is based on where the fields are in the entry. So when packets come in, in order to determine that it's a BitTorrent protocol, you have to look at certain portions of the information that was parsed out of that packet. And that meets the requirement of the claim

because this (ii) requirement is that you have to identify one or more locations in the packet where information is stored related to any child protocol. So LTIP protocol descriptions include not only the -- what information is associated with a protocol but where in the protocol fields it's stored.

Q. Based on that source code, were you able to determine whether the PTS products include Limitation (b)(ii)?

A. Yes.

Q. And do they, in fact, contain that limitation?

A. They certainly do.

Q. Does that mean you can check that box?

A. Yes, ma'am.

Q. Turning next to Claim Element (b)(iii), did you consider whether the limitations that are in that portion are present in the PTS products?

A. I did.

Q. What evidence did you consider?

A. I considered the same BitTorrent file from PTX-336. It talks here about if there is at least one protocol specific operation to be performed on the packet for the particular protocol, that that LTIP database, that description of protocols, says how to process that particular protocol. And so you -- you

go -- I'm looking at this BitTorrent example again at Lines 283 through -- or through 290 when it calls the doMatch function. And it's using the BitTorrent state and also the DataFlow_type, the RecognitionResult. Those are all information that describes how to process that particular protocol. And then the state of, in this example, the BitTorrent protocol.

Here it's looking at what to do with the message length, making sure that it's a valid message that has information in it. And then down here it's checking to make sure that there's also IP information inside of that packet.

Q. And based on that analysis, were you able to determine whether the PTS products contain that claim limitation?

A. Yes, they do through the use of the -- the LTIP.

Q. And does that mean you can check the box?

A. Yes.

Q. Now, turning to Claim 10, Element (c), did you consider whether the PTS products contain that claim limitation?

A. Yes.

Q. What evidence did you consider?

A. I'm relying on similar evidence. This is also

from the example of BitTorrentRec.h, and generally applicable to all of the protocols described in the LTIP. The limitation requires performing the protocol specific operations.

So where the limitation started with a set of protocol descriptions that had to be what information, where the information was, and what to do with the information, now it's actually performing those particular steps. So I can largely rely on the same evidence I've presented with respect to the other limitations that those steps existed. So I'm showing the BitTorrentRec.h as an example of the evidence I've relied on.

Q. And based on that evidence, did you conclude whether or not the Sandvine PTS products contain that limitation?

A. I did.

Q. And do they?

A. They do.

Q. Are you able to check that box?

A. Yes.

Q. Now, earlier you checked off the second part of that last limitation here. Did you also consider whether the first portion of that limitation is present in PTS products?

A. Yes.

MS. ABDULLAH: And if we can highlight that onto the screen.

Q. (By Ms. Abdullah) What evidence did you consider for -- for that portion of the last limitation?

A. I'm also using the BitTorrentRec.h file as an example of what's in the LTIP database. And here, the requirement is to perform parsing and extraction operations on the packet, to extract selected portions of the packet.

Here, I'm using source code from Line 630 to 634, and it talks about how it's doing a match responder where it's looking at particular information in the protocol and in the packets that have to be processed out.

Line 646 through 651 talks about trying to grab the source IP address which is parsing and extracting that information.

And then the same thing down here for the connection ID.

So the BitTorrent is an example of based on the LTIP where you're parsing and extracting information from particular protocols that are contained among those 500 in the LTIP database.

Q. So what is your opinion with respect to the

highlighted part on the screen right now?

A. That this limitation is met.

Q. Are you able to check that box?

A. Yes.

Q. Now, earlier you said that you wanted to go through the other claim limitations before you turned to the preamble?

A. Yes.

Q. Did you consider whether the preamble is met in light of the evidence that you reviewed?

A. Yes. I already have it checked off, and the reason for that is the preamble says: A method of performing protocol specific operations on a packet passing through a connection point on a computer network.

That one is straightforward to check off based on all of the other evidence I've presented and all -- and the fact that all of the other limitations are present in the accused product.

Q. What were you able to conclude with respect to Claim 10 of the '725 patent?

A. That based on my analysis and the fact that all of the limitations were present in the accused PTS products, that Claim 10 of the '725 patent was infringed.

Q. Now, in your analysis, you've shown the jury a number of documents. Where did those documents come from?

A. All of the documents came from Sandvine. They were produced by Sandvine as part of this litigation.

Q. So would you summarize for us what your conclusions are -- what your opinions are here today with respect to whether the Sandvine PTS products infringe the Packet Intelligence patents?

A. They do. For Claim 19 of the '789 patent, Claims 1 and 5 of the '751 patent, and Claim 10 of the '725 patent, the PTS products infringe those four claims.

Q. Now, earlier in your testimony, you described some of the benefits from the invention as in the patents. What are the benefits that Sandvine derives from infringing the Packet Intelligence patents?

A. Sandvine derives the exact same benefits from using the infringing technology as what I identified earlier that were described in the patent.

Q. And can you tell us briefly what you've shown on this slide in terms of those benefits?

A. Sure. That those three benefits fall into the categories of traffic classification, quality of service, and network security.

Q. Beginning with traffic classification, did you see any Sandvine documents that described that benefit that they're obtaining from using the technology?

A. Yes.

Q. Can you give us some examples?

A. Yes. So there's a document, PTX-344, from Sandvine, where it's talking about traffic classification. And what it's talking about here is that for best of breed solutions, including network policy control and deep packet inspection, that platforms for which traffic identify -- identification is a key technology, that you can identify up to 90 percent and even exceed 95 percent of the recognition of packets and flows and conversational flows in a network.

Conversely, when DPI technology is switched off where all you see is basic information about the connection, that the rates -- the recognition rates drop significantly. In other words, based on using the Packet Intelligence patented technology, the ability of Sandvine to get its 90 to 95 percent recognition rates, I believe, is largely attributed to the patented technology.

MS. ABDULLAH: And if we can skip back one slide.

Q. (By Ms. Abdullah) How does this description

in Sandvine's documents compare to how the patent talks about traffic classification?

A. This was a slide I showed earlier for traffic classification from PTX-3, the '725 patent, at Column 12, Lines 22 through 26 and 30 through 33.

In the description about how you can monitor single packets or multi-packets and be able to recognize flows and sub-flows that are related to each other is a key aspect of the patented technology.

Q. Can you remind us what the patent says about quality of service benefits?

A. Yes. So the patent talks about being able to determine quality of service as a mechanism that's based on traffic classification, that once you have an understanding of what the flows and the conversational flows are, you can start to understand whether or not users are receiving all of the packets on their screen and whether or not it's happening so that they don't get the little circle spinning where the video interrupts. Based on the traffic classification, you can determine whether they're getting all of the traffic that they need and being able to assess quality of service metrics.

Q. And did you see any Sandvine documents that showed that they are obtaining that same quality of

service benefits from the invention?

A. Yes. In PTX-347, on Page 1, this is their policy traffic switch overview. Some of the things that it describes is being able to dramatically increase the understanding of network usage. Includes things like quality score calculations for video quality of experience and then Voice over IP telephone calls over the Internet. And the -- and the quality that users perceive there, and that, also, is based on the patented technology.

Q. Can you remind us what the patent said about network security benefits?

A. Certainly. The -- in PTX-7, Column 8, Lines 26 through 32, the patents talk about being able to effectively recognize future packets associated with the same conversational flow. In being able to recognize inner-related flows in that way is a key aspect of network security. When you have websites that are seeing lots of requests in packets, some of those can be malicious packets where somebody is trying to break into a server and steal user names and passwords and credit card numbers. By being able to recognize what traffic is associated with what flows and whether it's malicious or not is one of the key benefits that the patent calls out.

Q. And did you see any Sandvine documents that showed that they are obtaining these same network security benefits from the invention?

A. Yes. So this is from PTX-381, a document called the Application Traffic Analysis. And that document on Page 5 and 6 says this also means that primed flows will be acted upon from the first packet rather than a few packets in as might be the case for regex or algorithmic protocols.

In other words, based on priming in creating entries for future flows that when they're instantiated, when they become valid, relate to the flow that created the priming entry. That gives you very rapid analysis and an understanding of what those flows are and how they relate. And that's important in the first step of network security. Intrusions have to be stopped as quickly as possible.

Q. If all Sandvine was doing is tracking connection flows, would it be able to achieve these same benefits that we find in Sandvine's documents?

A. No, absolutely not.

Q. Why not?

A. That -- an important aspect of being able to really understand what's happening in the network is to get beyond just a packet analysis or a flow level

analysis but to be able to understand what the traffic is, to relate the flows to each other, to understand the protocols and the applications and the traffic that's being used. And without the infringing technology, if you only looked at connection flows, you wouldn't have that kind of understanding. That's what their document says.

Q. Now, in this case, were you asked to consider anything else as part of your analysis?

A. Yes, I was.

Q. And what was that?

A. There's something called non-infringing alternatives.

Q. Can you please tell us what a non-infringing alternative would be?

A. A non-infringing alternative would be an alternative, some other option, where you could achieve the same benefits, that they would be commercially acceptable to the customers of Sandvine, the people who buy the PTS products, essentially the same benefits, the same functionality, but without infringing the claim, without performing all of the limitations of the claim. And that's what's called a non-infringing alternative.

Q. And did you -- did you form an opinion in this case as to whether there are any non-infringing

alternatives?

A. I did.

Q. What is your opinion?

A. That based on the evidence that I saw and the testimony from the witnesses and the experts, I saw no example of how you could achieve the benefits -- of how Sandvine could achieve the benefits of the patents and their products without infringing the claims of the patents.

Q. Thank you.

MS. ABDULLAH: I pass the witness.

THE COURT: Cross-examination.

Proceed when you're ready, Counsel.

MR. BURESH: Thank you, Your Honor.

CROSS-EXAMINATION

BY MR. BURESH:

Q. Dr. Almeroth, are you ready?

A. Yes, sir.

Q. It's good to see you again.

A. Likewise.

Q. A little bookkeeping off the start, if that's all right with you.

A. Yes, sir.

Q. I understand you're -- you're being paid. You're a consultant, correct?

A. Yes, sir.
Q. And can you state your hourly rate, please?
A. $600 an hour.
Q. And how much have you been compensated in this matter to this point?
A. I would say in the ballpark of about $100,000.
Q. Has PI paid you any other compensation in connection with the patents that are asserted here?
A. They have.
Q. And what's your total compensation with respect to the patents you've worked on here?
MS. ABDULLAH: Objection. Your Honor, may -- may we approach?
THE COURT: Approach the bench.
(Bench conference.)
MS. ABDULLAH: Your Honor, Mr. Buresh is inquiring about time that he spent on the NetScout matter which should not apply to what he's asking about.
MR. BURESH: Your Honor, he testified in his depositions that he did unified work as to the patents and that it was split between two cases. I'm not going to ask about NetScout. Those words will not come out of my mouth. I want to have an understanding of the total compensation he has received working on these patents.

MS. ABDULLAH: But -- but for the purposes -- you've already asked him how much he billed for this case, and he's answered your question.

Anything beyond that would be attributable to NetScout.

MR. BURESH: Not necessarily. If there's overlapping work on the prior art patents.

MS. ABDULLAH: I believe the question you asked --

THE COURT: Counsel, I didn't bring you up here to argue with each other.

MS. ABDULLAH: I'm sorry.

THE COURT: I'm going to sustain the objection. I think beyond what he's expended on this case gets tenuous relevance.

MR. BURESH: Thank you, Your Honor.

THE COURT: Let's proceed.

(Bench conference concluded.)

THE COURT: Let's proceed.

Q. (By Mr. Buresh) Dr. Almeroth, I understand you're a -- you're a professor currently; is that correct?

A. Yes, sir.

Q. And what percentage of your personal income over the last 12 months has been derived from this type

of litigation activity?
A. I think it's -- believe -- between about 50 and 75 percent.
Q. Now, Dr. Almeroth, you obviously remember my analogy, correct?
A. Yes, sir.
Q. I think you said you disagreed with me.
A. Yes, sir.
Q. So that would make you two out of two witnesses who disagreed with me, right?
A. I believe so.
Q. Well, let's see if we actually disagree. The loose rice in my right hand, those are connection flows. And you agree with that?
A. That's true. According to your analogy, that's what you said they were, yeah.
Q. And to get to a conversational flow, you had to wrap a mesh around them, right?
A. That's one example of how you could do that.
Q. So it doesn't sound like we actually disagree on the foundation of the analogy; is that correct?
A. No, I don't think that's true. I think I disagree with -- with how you are applying that analogy.
MR. BURESH: Your Honor, I object to nonresponsive and move to strike everything after no.

THE COURT: Overruled.
Let's proceed.
Q. (By Mr. Buresh) Now, Dr. Almeroth, you've talked about some benefits of the invention; is that correct?
A. Yes, sir.
MR. BURESH: And I'd ask to pull up Slide No. 21, please.
Q. (By Mr. Buresh) Isn't it possible to provide traffic -- excuse me -- isn't it possible to provide traffic classification in a packet monitor without using a conversational flow?
A. It is at a very basic level.
Q. And isn't it possible to provide quality of service in a packet monitor without utilizing a conversational flow?
A. I'm not sure that it is.
Q. Isn't it possible to provide network security in a packet monitor without utilizing a conversational flow?
A. At a very minimal level, I would agree with that.
Q. In your demonstratives, Dr. Almeroth, you use Netflix -- streaming Netflix as an example; is that correct?

A. I did.
Q. And you're not contending that these patents have anything to do with the actual streaming Netflix, correct?
A. No.
Q. It's just the packet monitor that's looking at the -- the traffic?
A. That's right.
Q. And these patents don't have anything to do with providing Facebook over the Internet; is that correct?
A. That's mostly correct. I can explain what I mean.
Q. No. Thank you.
In the PTS products that you've analyzed, you've identified a flow table; is that correct?
A. I have.
Q. And that flow table is in what I believe is called the PTS module or PTSM; is that correct?
A. That's correct.
Q. And the flow table in the PTS products contain flow records; is that correct?
A. They do.
Q. And each of those flow records represents an individual connection flow; is that correct?

A. That's not quite true.
Q. Are the flow records in the PTS products identified by anything other than connection information?
A. I believe they are.
Q. And does your opinion rely on that fact?
A. In part, it does. But I can certainly explain if you'd like.
Q. In the PTS products, when a packet is received by the packet monitor, is the packet assigned to a flow record based on anything other than connection information?
A. No, I don't believe so.
Q. So packets are assigned to flows based upon their connection information; is that correct?
A. That's not quite correct. There's a little technical inaccuracy in your question.
Q. Are you familiar with the concept of a 5-Tuple?
A. Yes, sir.
Q. Can you describe for the jury what a 5-Tuple is?
A. Sure. A 5-Tuple is five pieces of information. I'm assuming in this context, you're referring to the source IP address, the destination IP

address, the transport layer port number, the source, and the destination port number, and then also the protocol field.

Q. And is each flow record in the PTS products based upon a unique 5-Tuple?

A. Generally, that's true.

Q. And, generally, in the Internet, a 5-Tuple defines a connection?

A. Yes.

Q. Now, in the PTS flow table that resides in PTSM, are there any links between flow records in the flow table?

A. For some protocols, there are.

Q. Do you rely on that for your opinion?

A. I do -- well, for part of it.

Q. In the PTS flow table, are there any pointers between flow records within the table?

A. I don't have all of them memorized. There might be.

Q. Do you know?

A. I -- sitting here now, I don't -- off the top of my head, I don't remember.

Q. In the PTS flow table, is there any pointers to an index?

A. I'm not sure what you mean.

Q. Okay. In the PTS flow table, within the flow record, are there any pointers to an index?
A. I think you just asked the same question. I still don't know --
Q. You don't get it?
A. -- the question. Yeah.
Q. Okay. Fair enough.
THE COURT: Make sure you don't talk over each other, gentlemen.
MR. BURESH: Thank you, Your Honor.
THE COURT: Let's continue.
MR. BURESH: If we could turn to Slide 48, please.
Q. (By Mr. Buresh) Now, on the left-hand side of Slide 48, is this what we've been talking about, the flow record in the PTS products?
A. Yes.
Q. And it's depicted as -- I'm sorry, it is a set of columns in the table?
A. Generally, that's correct.
Q. And while we have this slide up, Dr. Almeroth, this is Claim 19 of the '789 patent; is that correct?
A. Yes, sir.
Q. And if we look at Limitation (d), which is already highlighted on this slide, do you see the

language none or more flow-entries for previously encountered conversational flows?

A. Yes.

Q. You agree that none or more flow-entries for previously encountered conversational flows is a requirement of this claim, correct?

A. It is.

Q. Have the inventors ever described a flow-entry for a conversational flow as a consolidated entry?

A. They might have in the provisional that was filed for the patent before the official application for the patent was made.

Q. So a flow-entry for a previously encountered conversational flow may be a consolidated entry?

A. I can't answer that question. I don't have enough information.

Q. Do you know whether the inventors said that?

A. Those specific words, I couldn't say yes or no.

MR. BURESH: If we could, could I turn to DX-44, please?

Q. (By Mr. Buresh) Dr. Almeroth, on the screen in front of you is DX-44. Do you recognize this document?

A. I do.

Q. I'm going to ask you to turn to Bates No. 11860.
A. Okay. I'm there.
MR. BURESH: Could you slide out just a minute so I can see the line numbers, please?
Okay. If we could look around Lines 18 through 20, please.
Q. (By Mr. Buresh) Do you see in this provisional application -- let me just back up a step.
What is a provisional application?
A. A provisional application, I believe, is something filed in advance of the -- the actual patent application filing.
Q. That supports the later filings?
A. It might. It -- it might change, it might offer other different information.
Q. You understand that the patents asserted in this case claim priority back to this provisional document?
A. Yes.
Q. And this document describes at Lines 18 and 19 that the result of this processing is a consolidated flow-entry, do you see that?
A. I do.
Q. Is that the inventors describing the creation

of a consolidated flow-entry?

A. I think that's correct.

Q. And a consolidated flow-entry would represent multiple connection -- back up. Strike that, please. A consolidated flow-entry could represent more than one connection flow, correct?

A. I'm not sure. I -- I would have to go back and look at the provisional to see what it defines. It's -- it's not a term that's used in the claims that I've analyzed. So we'd have to look in this document to see what it said about consolidated flow-entries.

Q. You agree with me that "none or more flow-entries for previously encountered conversational flows" is a claim term you've encountered in the claims, correct?

A. Yes.

MR. BURESH: I'd like to turn now to Demonstrative Slide 52 from Dr. Almeroth's slides.

Q. (By Mr. Buresh) Now, this is -- on this slide, is this some of your evidence for a conversational flow in the Sandvine PTS products?

A. Yes.

Q. And if I see this cited correctly, it's PTX-381; is that correct?

A. Yes, sir.

Q. Now, do you know if PTX-381 was a final document that Sandvine provided as opposed to a draft?
A. As I sit here now, I don't recall specifically.
Q. Do you investigate those sorts of things before you rely on a document?
A. In -- in most cases, usually I have either evidence from the witness or source code that I can look at to confirm that functionality.
Q. This first sentence under Priming: Priming is the act of pre-creating a flow state within the PTS based on known 5-Tuple information, usually from a tracker.
Do you see that?
A. I do.
Q. Do you believe in the PTS products that priming pre-creates a flow state within the PTS?
A. I believe that to be generally true. I think the specific details of how it works are better expressed in the code.
Q. Do you believe this document is accurate?
A. Generally, for the proposition that it stands, I do believe it's accurate. I don't know if every single sentence is exactly technically accurate, but it's only part of what I relied on.

Q. Well, based upon your review of this document or the code or whatever you reviewed, do you believe that priming pre-creates a flow state within the PTS?

A. Again, it's generally correct. I can explain. I mean, for example, the flow state, there's a priming table that's created. If you call that a flow state, then I think it's accurate.

THE COURT: Dr. Almeroth, several times you've invited the Counsel to ask you to explain something. If he wants you to explain something, he'll ask you to explain it.

THE WITNESS: Yes, sir.

THE COURT: Otherwise, just limit your answer to the questions asked.

THE WITNESS: Yes, Your Honor.

THE COURT: Certainly, your Counsel or Counsel for the Plaintiff will have an opportunity to ask you that kind of question when they get a chance to go back to the podium.

All right. Let's continue.

Q. (By Mr. Buresh) What does it mean to you, Dr. Almeroth, to pre-create a flow state within the PTS?

A. What that means is that there's a priming table, and it includes information, including what's called wild carded information where the eventual flow

that's created from the priming entry is based on that wild card information.

Q. Is a flow-entry created in the PTS at the time of this priming event?

A. No.

Q. That next sentence, for example, when a SIP call is signalled, the SIP tracker sees the INVITE and creates a data flow right away. Do you see that?

A. I see that.

Q. Is that an accurate statement?

A. Not exactly.

Q. So a SIP tracker does not create a data flow right away; is that correct?

A. Not a data flow. A priming entry.

Q. So this document does have some inaccurate -- inaccuracies in it?

A. Not quite. On the time scale that it's talking about, I think that it's accurate. And the fact that I can explain it, based on the other evidence, means I've understood how the system works.

Q. I want to talk to you about this tracker for a moment on the bottom part of the slide.

A. Yes.

Q. Now, you've used examples in your direct examination of Netflix; is that correct?

A. I have.
Q. So does Sandvine use a tracker for Netflix communications?
A. If I recall correctly, I believe it does in the LTIP.
Q. And does your opinion rely on that as a fact?
A. No.
Q. You gave the example of Facebook; is that correct?
A. I'm not sure that I did.
MR. BURESH: If we could turn to Slide 19, please.
Q. (By Mr. Buresh) Don't you have Facebook depicted here on the middle of the screen, middle right-hand side?
A. I do. That wasn't the example I used, though.
Q. Do you think Facebook -- or, I'm sorry, do you think the PTS products use a tracker for Facebook communications?
A. I believe they do.
Q. And is your opinion based on that fact?
A. No.
Q. What about priming, does Sandvine's PTS products use priming for -- for Netflix?
A. I believe they do, and Netflix uses HTTP.

Q. Do you know whether Sandvine uses priming for Facebook?

A. The same answer. When Facebook is using HTTP, it does.

MR. BURESH: If we could go to Demonstrative 52 -- actually 53, please.

Q. (By Mr. Buresh) Now, on this slide, Dr. Almeroth, at the last sentence that you've emphasized, it says: Flow priming is required when you need information from other flows to identify the flow.

Do you --

A. I do see that.

Q. You see that language?

A. Yes.

Q. Is it true, Dr. Almeroth, that using information from one flow to identify a later flow is not by itself evidence of a conversational flow?

A. By itself, that's correct.

Q. Do you agree with me that priming by itself does not evidence a conversational flow?

A. By itself, that's correct.

Q. A moment ago we were discussing SIP. Do you recall that, S-I-P?

A. Yes.

Q. Can you explain what SIP is to the jury?

A. Sure. SIP is the session invitation protocol. It's used when you send telephone calls over the Internet.

Q. Using a SIP example, when in the PTS products is a conversational flow identified?

A. SIP has a number of commands associated with it. For example, there's an invite. And what the PTS products are able to do is to monitor the flow-entry, use a tracker and analyzer to associate it with SIP. That results in an entry entered into the priming list. When the entry is entered into the priming list, there's a relationship established by the parent SIP, the control channel, and then ultimately what the data channel will be.

When packets start to arrive for the new -- and a new entry is created, and then it's inspected, and it's matched up with the priming entry, then that establishes that you've had a relationship between the SIP invite as part of the control channel and the SIP data channel.

Q. Now, when I deposed you, Dr. Almeroth, I asked you the same question. Do you recall that?

A. I believe so.

Q. And your answer at that time was that you didn't know whether you went into that level of detail

in your analysis. Do you recall that?

MS. ABDULLAH: Objection, Your Honor. Improper impeachment.

THE COURT: Overruled.

A. I might have said something like that. I'd have to see the depo transcript to confirm.

Q. (By Mr. Buresh) Sure.

MR. BURESH: If we could -- I'll refer you to your deposition, Dr. Almeroth, at Page 79. It's in your cross binder. If we could go to Line 17.

Q. (By Mr. Buresh) I asked you the question: I'm going to use SIP as an example of a multi-connection flow.

And your answer was: Okay.

My next question: When the Sandvine PTS products are analyzing SIP traffic, at what point -- what operation in the PTS system results in a conversational flow?

You see that question?

A. Yes.

Q. And your answer was: I don't have the details of the processing memorized. I would have to go back and look at the documents and the report to try to answer something that specific.

You agree?

A. Yes.

Q. My next question: Well, you're certainly free to look at your report to your heart's content. When -- and just take a SIP example. When in the PTS products is a conversational flow identified?

And your response: It'd be the same answer. I don't know that I went into that level of detail in the report or that it's sort of -- it wasn't necessary to identify a particular step to determine when conversational flows could have technically existed. I mean, that's -- might be a difficult analysis, especially for a particular protocol among hundreds of protocols. It's more what I've identified as the general operation of the system and exemplary evidence and protocols that demonstrate that operation.

Do you recall that testimony?

A. I do.

Q. And that's a slightly less specific answer than what you've just given here today; isn't that correct?

A. No, not quite. I mean, your question was asking when exactly. And I said it would be difficult to determine when exactly.

But in answering your question here about generally what happens, I gave you the -- the steps.

MR. BURESH: I want to turn now to Slide 108, please.

Q. (By Mr. Buresh) Now, this slide addresses what you've described as a benefit of the invention, traffic classification; is that correct?

A. Yes.

Q. And you've cited a Sandvine document, PTX-344; is that correct?

A. Yes.

Q. Now, this document from Sandvine is describing deep packet inspection; is that correct?

A. That's part of it, that's correct.

Q. And you would agree that deep packet inspection existed before these patents were filed, correct?

A. That's correct.

Q. And you would agree that just because a product performs deep packet inspection does not mean that it infringes the asserted claims; is that correct?

A. That's correct. It's a very broad term that can mean something very superficial.

MR. BURESH: I'd like to go next to Slide 34.

Q. (By Mr. Buresh) On this slide, Dr. Almeroth, are you describing the metrics that can be performed by

the PTS products?

Or let me be slightly more specific. Are you describing the speeds at which the PTS products can operate?

A. I did not.

Q. Does it have a Sandvine document on your slide; is that correct?

A. It is.

Q. And if we take the smallest of the PTS products, the 22000, it has an inspection capacity of 40 gigabits per seconds?

A. That's what it says.

Q. And if we take the largest PTS product, the 32000, it can go up to 200 gigabits per second; is that correct?

A. Yes.

Q. And handle up to 60 million flows at a time?

A. That's correct.

Q. And the smallest PTS product can handle up to 16 million flows at a time; is that correct?

A. Yes.

Q. And when it's talking about those concurrent flows, do you understand that to be concurrent connection flows in the PTS products?

A. Yes.

Q. Dr. Almeroth, would you agree that identifying the application for a particular flow is not the same thing as identifying a conversational flow?

A. It's not the same thing. They can be related.

Q. Can you identify the application for a particular flow without identifying a conversational flow?

A. It -- it might be possible. I mean, I'd have to think about it.

MR. BURESH: Your Honor, I pass the witness.

THE COURT: Redirect?

MS. ABDULLAH: No redirect, Your Honor.

THE COURT: All right. Then you may step down, Dr. Almeroth.

THE WITNESS: Thank you, Your Honor.

THE COURT: Plaintiff, call your next witness.

MR. DAVIS: Your Honor, at this time, the Plaintiff calls Mr. Phil Vachon to the stand.

THE COURT: All right. If you'll come forward, Mr. Vachon. You've previously been sworn.

MR. DAVIS: Your Honor, may I approach?

THE COURT: You may.

All right. Counsel, you may proceed.

MR. DAVIS: Thank you, Your Honor.

PHIL VACHON, PLAINTIFF'S WITNESS, PREVIOUSLY SWORN

DIRECT EXAMINATION

BY MR. DAVIS:

Q. Good afternoon, Mr. Vachon.

A. Good afternoon, Mr. Davis.

Q. Would you please introduce yourself to the jury?

A. My name is Phil Vachon.

Q. And why are you here, Mr. Vachon?

A. I'm the managing member of Packet Intelligence LLC.

Q. Are you married?

A. I am. 29 years next month.

Q. Do you have any children?

A. I have four grown children, two in college, one starting her own business, and one in the U.S. Coast Guard.

Q. Where are you from?

A. I was born and raised in Woonsocket, Rhode Island.

Q. And is that where you went to high school?

A. It is. I -- I went to Woonsocket High School which is in a -- in a very small town with a lot of clothes factories. And at the end of high school, I had

a choice of staying in town or going in the military.
Q. And what did you do?
A. I joined the United States Air Force active duty.
Q. What year was this?
A. This is 1975.
Q. And what did you do in the Air Force?
A. I went to -- after basic training, I went to jet engine mechanic school. And for the next three years, I turned wrenches on a flight line.
Q. And where were you stationed?
A. I was stationed in military airlift command in Dover Air Force Base, Delaware for most of my time.
Q. How long did you serve?
A. I served for four years.
Q. And how were you discharged?
A. I was honorably discharged.
Q. Now, while you were in the military, did you attend school?
A. I did. The Air Force had a very good program called the Community College of Air Force. And when I wasn't on duty, I was taking computer programming classes.
Q. What did you do after you were discharged?
A. After I was discharged, I went back to

Providence, Rhode Island, and I went to night school, and I worked during the day at the Veteran's Administration filing papers.

Q. Did you complete your degree?

A. I did not.

Q. Why not?

A. Well, my car blew up, and I ran out of money, so I had to get a job as an entry level programmer at a -- at a business in Providence.

Q. Now, where did you see your first computer?

A. The first time I saw a computer was on the airplane that I was working on, which is a C-5 Galaxy, big cargo airplane. The flight engineer station had a very primitive computer that gave the mechanics diagnostics about what was going on with the airplane, and I was pretty fascinated by that.

Q. And when you got that job programming computers after your car blew up, what kind of programming were you doing?

A. I would call it the language now of the ancient. These are languages like RPG, COBOL, FORTRAN. This is in an era where programs were kept on punch cards and the Internet was not as it is today is not even known.

Q. How long were you a programmer?

A. Oh, I programmed various companies up until about 1998 when a friend of mine approached me to go work for a software company called Oracle Corporation.

Q. And what is Oracle?

A. Well, at the time Oracle was a really small company, a small database software company. And it turned out to be a very large database company over the years.

Q. How long were you at Oracle?

A. I was at Oracle for nine years.

Q. And after Oracle, where did you go?

A. After Oracle, I went to a company called Liberate Technologies. Oracle had a division called the video server division that they want to spin out as a separate company, and I left Oracle to go with that separate company.

Q. And how long were you at Liberate?

A. I was there until 2005 when we sold the company to Comcast.

Q. And what happened when the company was sold to Comcast?

A. Well, I was apparently management overhead, and I was let go.

Q. What did you do after that?

A. I took a consulting position at a company

called Intellectual Ventures.

Q. Who is Intellectual Ventures?

A. Intellectual Ventures is a company that was formed by one of the co-founders of Microsoft, and it's an intellectual property holding company. They buy patents, they sell patents, they license patents, and they also have an innovation incubator.

Q. And what did you do when you were at Intellectual Ventures?

A. At Intellectual Ventures, at that time, Intellectual Ventures was looking for expertise in telecommunications, licensing and telecommunications companies. And that's what I did at Oracle, so I helped them license intellectual property to telecommunications companies.

Q. Now, was your experience with intellectual property while you were at Intellectual Ventures, was that your first experience with intellectual property?

A. No, I had experience with intellectual property when I was at Liberate. The engineers in the company reported to me. We established a program -- an incentive program, a bonus program for them to file patents on ideas that they were working on, they were developing, like you heard from Mr. Dietz this morning. That was one -- my first experience with intellectual

property. And we were also sued by a competitor for intellectual property infringement.

And then finally, I was an executive in a company, and we were using public money -- public company money, and we were spending a lot of it developing new technologies, Liberate Technologies was one of the pioneers of putting the Internet on cable set-top boxes. So we were building a lot of new technologies. And the only way to protect that investment for your shareholders is to file patents.

Q. So what happened after you left Intellectual Ventures?

A. Well, after I left Intellectual Ventures, I was 50 years old, and I kind of thought I wanted to work for myself for a while. I had been working for somebody else my whole career. My kids were at an age where I wanted to spend more time at home, and so I decided to look around for something to do on my own that could use the skills that I developed over the years.

Q. Okay. And what did you do?

A. Well, I had met Mr. -- Mr. Brad Brunell through -- through mutual friends, and we decided to go into the intellectual property licensing business together.

Q. Now, when was Packet Intelligence formed?

A. Packet Intelligence was formed in 2012.
Q. And who owns Packet Intelligence?
A. The owners of Packet Intelligence are Mr. Brad Brunell, who's sitting back there, myself, and our CFO, Mrs. Lily Guse.
Q. Now, what is your general role within Packet Intelligence?
A. I manage the day-to-day business of the company.
Q. You mentioned Mr. Brunell. Would you please tell the jury a little bit about him?
A. Sure. Mr. Brunell is -- is my partner in this company. As I said, we met through mutual friends. Mr. Brunell is first and foremost a good guy. He's a trustworthy guy. He's a good family man. He's very close to his children. But -- and so that was very important to me.
Secondarily, he's a -- he had worked for Microsoft for, like, 16 years, and he's got a really broad technical knowledge of a bunch of different fields of technology, which I don't -- I don't necessarily have. He was also the head of intellectual property at Microsoft for a number of years. So that was good. Microsoft has got a large portfolio, and they do inbound and outbound licensing, and Mr. Brunell ran that part.

Mr. Brunell is an inventor. He himself is an inventor. He's been an inventor with Bill Gates -- with Mr. Bill Gates. So he had a lot of complementary skills to what I brought to the table, and that's a little bit about Mr. Brunell.

Q. How did Packet Intelligence come to own the patents in this case?

A. We bought them from a company called Exar.

Q. Now, why did Exar want to sell the patents?

A. Exar had -- as you heard from Mr. Dietz this morning, Exar had moved on, and the patents weren't core to their business.

Q. Now, what happened next after Packet Intelligence was introduced to the patents owned by Exar?

A. Well, we're looking at buying a -- for us a significant asset, so you do what you normally do when you're going to buy anything that big in that you do due diligence. You make sure that you're getting what you're paying for, that -- that the people who are selling to you own it -- actually own it. You try and do some deep research on it and try to understand what it is that you're buying. And so we spent a significant amount of time and effort diligencing the patent portfolio, excuse me.

Q. What kinds of things did you look at in performing the due diligence process?
A. Well, we hired some people to look at various technical aspects of the patent, the file histories, the wrappers, the applications, the chain of title, things like that.
Q. Did your team study the technology in the patents?
A. They did.
Q. And did they identify what the field of technology described in the patents is?
A. Yeah. I think you've been hearing about it all day, but it's generally called network monitoring. But specifically it's deep packet classification is the -- is how I would phrase it.
Q. Now, how would you describe the network monitoring market?
A. Well, as we all heard this morning, a lot more devices on the network every day, tablets, phones, computers, Inter -- Internet connected devices. So the networks are getting bigger, and it's a growing market. So that's how we evaluate it.
Q. Who uses this technology?
A. The users of the technology are the people that own the networks. They're network operators that

-- got people that you would know, AT&T, Verizon, T-Mobile, people like that, Comcast, people who have spent a lot of money building networks and need tools to -- to manage and monitor these networks.

Q. How many patents are in the patent portfolio?

A. There are 22.

Q. And let me just clarify. Those 22 patents, those are the patents that list Mr. Russell Dietz as the lead inventor?

A. Yes.

Q. Okay. What did -- does the number of patents -- or what did the number of patents tell you about the portfolio when you were evaluating it in your due diligence process?

A. Well, we had -- like I said earlier, we had a significant patent program at Liberate, and when you develop a patent, there's a -- it's expensive, it's time consuming, and it's a bunch of work. And even worse than that, you're taking your engineers away from what they're doing building product to actually write down what it is that they're building so that you can get a patent on it.

So the fact that somebody took the time and effort to build a portfolio of 22 patents around this particular network monitoring deep classify -- patent

classification technology was meaningful to me. Somebody had spent real money doing this and -- and taken a lot of time doing it.

Q. How many patents in the portfolio are U.S. patents?

A. There are 10 issued U.S. patents.

Q. And what other countries are represented in the patent portfolio?

A. Germany, UK, China, Japan, and I think there's Australia is the last one. But, again, this is a significant indicator of value because as hard as it is to get a U.S. patent, in some of these countries it's even harder than it is to get in the U.S. So somebody spent, like I said, a bunch of time and money doing this.

Q. Now, did you look at who the inventors were in evaluating this portfolio?

A. We did. We thought it was a key factor.

Q. And we mentioned Russ -- Mr. Russell Dietz as the lead inventor. What did you learn about Mr. Dietz?

A. Well, we studied his background, and Mr. Dietz has a -- an extensive background in the -- in the network arena. As you saw this morning, he talks -- can talk in great detail about networking.

So we looked at the jobs that he had

performed. You know, did he actually have the relevant experience to invent this stuff. And the more we got to know, the more we liked Mr. Dietz's background.

And then we came to the conclusion that, you know, I had worked in Silicon Valley for many years. And there are very few like Mr. Dietz. I mean, he -- he's -- companies are lucky to have a guy like that, and you typically have like one, not five of those guys. So we really liked Mr. Dietz's background.

Q. Did you look into the other inventors?

A. We did. There's five other -- five other inventors on the patent -- on these patents, and they are from a variety of different disciplines around networking. So you heard this morning, you know, they had a software guy. They had a chip guy. They probably had some testing people. I mean, there's a whole bunch of different varieties of disciplines that go into -- to building technology, and they seemed to have a pretty robust staff.

Q. What are forward citations?

A. Forward citations are when somebody refers to your patent when they're getting their own patent. So they -- I think you saw it on one of the exhibits this morning. In our patents where we cited back to -- I don't know, there are eight or 10 patents in the -- in

our -- in the patent that was shown this morning. This is when somebody else is getting a patent, and they're citing back to you.

Q. Now, how many forward citations were there at the time that you were evaluating the portfolio for purchase from Exar?

A. There were 350, approximately, plus or minus.

Q. How many forward citations are there today?

A. There are about 850. So 850 inventions that have been approved by the United States Government refer back to and have built upon the patent portfolio that we own.

Q. Now, what does the fact that others continue to cite to your patents indicate to you?

A. Well, the obvious answer is that it's important to somebody, otherwise they wouldn't keep doing it. But the inverse of that is probably more interesting. If the portfolios weren't about something interesting, then nobody would be citing to it. So the fact that it had so many citations was an indicator of value.

Q. What kind of companies are citing to the Dietz patents?

A. So these are companies that are building this technology into their products that are selling these

products to the network operators that I talked about earlier. So these would be companies like Cisco, IBM, Amazon, and Sandvine.

Q. I'm sorry, even Sandvine?

A. Yeah, Sandvine. I'm sorry, I said that kind of fast, Sandvine.

Q. I'm showing you PTX-163.

MR. DAVIS: Could I have that, please?

Q. (By Mr. Davis) Do you recognize this document?

A. Yes, I do.

Q. What is this document?

MR. DAVIS: Could we get the front page, please?

THE WITNESS: Could I have the front page, please?

MR. DAVIS: And if you could blow up the top paragraph, please. There we go.

Q. (By Mr. Davis) Mr. Vachon, do you recognize this document?

A. I do.

Q. What is it?

A. It's the patent purchase agreement. It's the document we used to buy the portfolio from Exar.

Q. Thank you.

MR. DAVIS: And if we could have Section 2.2, please.

Q. (By Mr. Davis) Mr. Vachon, what is Section 2.2?

A. It's the purchase terms, how much we paid for the patents.

Q. How much did PI purchase the patent portfolio for?

A. Well, we ultimately paid $875,000 for the portfolio. The cash payment up front was $500,000, as you see in 2.2.1. And then we had a success fee of $375,000, based upon licensing activity. And we ended up paying that to Exar, so the total was 875,000.

Q. Now, what did Packet Intelligence do with the patents once it acquired them?

A. We spent about a year in further diligence studying the companies that were potentially using the technologies and doing further diligence on the portfolio.

Q. And this was in addition to the pre-purchase diligence that you did?

A. Yes. Our total pre-purchase and post-purchase diligence was -- was about 18 months.

Q. Have other companies taken a license to these patents since you've owned them?

A. They have.
Q. Can you give me an example?
A. The most recent example is Cisco Systems.
Q. Now, how did Cisco come to take a license?
A. We filed a lawsuit against Cisco. They contacted us. We began discussions. And shortly thereafter, they took a license.
Q. Now, was Cisco a forward citer to the patents?
A. Yes, Cisco had dozens, I would think that the number is about 50 forward citations to this portfolio.
Q. Did the Cisco lawsuit include the same patents at issue in this case?
A. The very same.
Q. Who are Cisco's competitors in the network monitoring field?
A. Well, the number one competitor, if you read the -- the market data, is Sandvine.
MR. DAVIS: Your Honor, at this time I would like to go into the details of the Cisco agreement which is confidential. I would request that the courtroom be sealed.
THE COURT: All right. Without objection, the Court will order the courtroom sealed, which means that if you're present and you're not subject to the protective order that's been entered in

this case, then you should excuse yourselves until the courtroom is unsealed and reopened.

Please exit the courtroom if you're not subject to the protective order in this case.

(Courtroom sealed.)

(Testimony filed under seal by the Court.)

(Courtroom unsealed.)

THE COURT: All right. The courtroom is unsealed.

You may proceed, Counsel.

MR. DAVIS: Thank you, Your Honor.

Q. (By Mr. Davis) Now, during opening -- well, actually, a week ago in voir dire, did you hear Mr. Gillam ask whether it was right to accuse someone of taking something they didn't take?

A. I did.

Q. Now, do you agree with that statement, Mr. Vachon?

A. I agree with Mr. Gillam a hundred percent. That's not right. But I would hope Mr. Gillam would agree with me that taking something that doesn't belong to you and not paying for it is equally wrong.

Q. Now, in this case, Packet Intelligence is asking the jury to award $13.8 million; is that correct?

A. Yes.
Q. And where did the number $13.8 million come from?
A. It came from a report from our damages expert, Mr. Jim Bergman, who determined that as a reasonable royalty.
Q. And what does the $13.8 million represent?
A. It's a reasonable royalty for Sandvine's infringing use of the product.
Q. Now, when Packet Intelligence approached Exar to discuss purchasing the patents, had Packet Intelligence been using the patented technology to make any products at that time?
A. No.
Q. Had Packet Intelligence made any money from the patented technology when it approached Exar to purchase the patents?
A. No.
Q. Had Packet Intelligence taken anything of value from Exar when it approached Exar?
A. Not -- I'm sorry, not a thing.
Q. If Packet Intelligence had made $114 million from using patented technology owned by Exar, would P -- Packet Intelligence have paid more in the acquisition of the Exar patents?

A. Yes, if we had made $114 million, they would not have sold it to me for $875,000, for sure.

Q. Now, I believe Packet Intelligence has been criticized in this lawsuit for filing a lawsuit against Sandvine before reaching out. In your experience, why did you file a lawsuit against Sandvine rather than reach out first?

A. In patent licensing, you're seeking a royalty for something that people are infringing on. In my experience, that's not a call that people want to get. And so consequently, again, in my experience, the best way to do -- go about our business is to file the lawsuit and then engage in discussions. It's just the way our industry works.

Q. Mr. Vachon, final question, why are we here today?

A. Well, Packet Intelligence, which is essentially Mr. Brunell and I, bought this portfolio. We paid for it with our own money. We've worked hard for a number of years to license it. And at this point, I have two choices, it's either let Sandvine continue to use the technology for free, or I can come to this jury and ask them to make the decision on whether we're entitled to a reasonable royalty. I actually don't have a third choice. There is no third choice.

Q. Thank you, Mr. Vachon.

MR. DAVIS: Your Honor, I pass the witness.

THE COURT: All right. Cross-examination by the Defendants.

MR. GILLAM: May I proceed, Your Honor?

THE COURT: You may, Mr. Gillam.

CROSS-EXAMINATION

BY MR. GILLAM:

Q. Good afternoon, sir.

A. Good afternoon to you.

Q. Mr. Vachon, I don't believe we have met -- or we have met before this litigation, have we, sir?

A. We shook hands in the hallway earlier today.

Q. Yes, sir, nice to meet you.

A. Nice to meet you, too.

Q. Mr. Vachon, the price -- well, first of all, the Packet Intelligence business that you have told this jury about was formed in 2012?

A. Yes, sir.

Q. And you said it's you and Mr. Brunell and Ms. Guse?

A. Yes, sir.

Q. Okay. Who else are partners or shareholders in your business?

A. It's just the three of us.
Q. You have any other employees other than the three of you?
A. No.
Q. So the entire business of Packet Intelligence consists of the three of you and no other employees at this time?
A. No other direct employees.
Q. All right. Now, the price that you paid for these patents that we're talking about today was $500,000 upfront, correct?
A. That's correct.
Q. And then you said there was a success fee added to that after your initial $500,000; is that right?
A. It was in the contract, yes, a 500,000-dollar cash payment and then a 375,000-dollar success fee.
Q. And by success fee, what you're talking about is that if you were successful in going out and collecting money from these other firms or other businesses, then you would have to go back and pay additional money to Exar?
A. That's correct.
Q. And so the total amount of money that you paid to Exar would be $875,000?

A. That's correct.
Q. That is the total of the investment that you put into -- how many did you say, 22 patents?
A. I don't believe I can answer the question the way you've posed it.
Q. Okay. For your $875,000, how many patents did you get?
A. 22.
Q. All right. And on that 875,000-dollar investment, so far, you've collected almost [redacted] from another business, correct?
REDACTED BY ORDER OF THE COURT
A. That's correct.
Q. And what you're demanding from Sandvine in this case, on that 875,000-dollar investment, is another almost $14 million?
A. That's correct.
Q. So if you add the two of those up, if you're successful in this case, on your 875,000-dollar investment, you're going to have a return of somewhere around $33 million, correct?
A. No, that's not correct.
Q. Well, is 19 point something million plus 14 -- or 13.8 million around $33 million?
A. That would be the gross revenues.
Q. Gross revenues. And you said that you're also

involved -- or you said you looked at other companies as well is what you told the jury a minute ago?

A. That's correct.

Q. You visited with us about something that you called due diligence a moment ago. Do you remember that?

A. I do.

Q. And you discussed the fact that before you bought these patents, that you spent about -- how long was it, a year looking back into these patents, pre -- pre-purchase?

A. Six months pre-purchase.

Q. I'm sorry. Six months pre-purchase and another year post-purchase?

A. That's correct.

Q. For a total of 18 months that you actually looked into these things, right?

A. Yes, sir.

Q. Now your pre-purchased look into, that's when you're actually looking back at the history of these patents, how they came about. You're looking at the inventors and all that type of thing?

A. Yes, sir.

Q. Okay. And how many inventors did you say there were on the three patents that are at issue in

this case today?
A. I believe there's a total of six.
Q. Have you met all the inventors, Mr. Vachon?
A. I have not.
Q. You met Mr. Dietz, of course, because he's here today, right?
A. I did see him today, yes.
Q. To be clear, if you're -- if your company recovers any money in this lawsuit, that money is not going to these five guys that invented what are set out in these patents, is it?
A. That's correct.
Q. That money -- the inventors -- the five inventors will not see any money as a result of this lawsuit for the inventions that they invented?
A. Other than the consulting fees that you heard about this morning, no.
Q. The consulting fee, yes, sir. The consulting fee, and that is that you're paying Mr. Dietz an hourly rate in this litigation to come up and testify, correct?
A. That is correct.
Q. So the money that you recover in this lawsuit and the money that you recovered in the other one that you talked about a few moments ago goes to you and Mr. Brunell and Ms. Guse -- Guse -- Guse?

A. It goes to Packet Intelligence LLC.
Q. Packet Intelligence LLC is the three of you, right?
A. We are the principals. And there's, of course, further information I could explain if you'd like.
Q. Who are the three principals in Packet Intelligence?
A. The three I mentioned.
Q. You, Ms. Guse, Mr. Brunell?
A. That's correct.
Q. Now, in your investigation, Mr. Vachon, did you investigate and determine that the PTS, the first PS -- PTS product manufactured by Sandvine came out before these three patents were even published?
A. That's beyond my technical depth. We hired a team of people to look into those types of -- types of issues. I'm sorry, I can't answer that question.
Q. Well, this is your property, correct?
A. It is.
Q. It's property that you purchased?
A. Yes, sir.
Q. Before you went out and brought a lawsuit against someone, would it be of interest to you if their first product -- we're talking about PTS products,

correct?

A. I'm sorry. Maybe we need to start over. I -- I might have missed your first question.

Q. Certainly.

A. Let's try that again.

Q. You understand this lawsuit is about the PTS products? We've been talking about that.

A. I do.

Q. Okay. Did you understand that the first PTS product released by Sandvine came out before these patents were ever published?

A. Before they were --

Q. Issued?

A. -- issued would be the right -- correct word.

Q. Issued.

A. I believe that's right.

Q. Okay. Have you personally read these patents, Mr. Vachon?

A. I did.

Q. And you studied packet monitoring and deep packet classification?

A. No, sir.

Q. Well, did you look at it enough to determine -- as you said a few moments ago, you said -- you described the market. Did you determine -- did you

study it enough to determine who you should go after in the market? Did you study enough to learn that?

A. I'm not technically deep enough to do that. We hired people to do that.

Q. Okay. You heard Mr. Skiermont in opening statement tell the jury that these patents -- these three we're talking about here are what's called foundational patents, correct?

A. I heard that.

Q. You've heard him talk about how important they were, correct?

A. I did.

Q. And you told this jury that they're cited over 800 times in other people's patents, correct?

A. That's correct.

Q. When you bought those patents from Exar in 2012, it gave you certain rights as a patent owner, didn't it, sir?

A. The rights as the owner.

Q. Okay. In other words, once you owned those patents -- once Packet Intelligence owned those patents, they acquired certain rights that went along with those patents, didn't they?

A. Yes.

Q. You had the right back in 2012, Mr. Vachon, to

set up a manufacturing plant and to make product using the technology that you have told this jury is so foundational and so important. You had that right, didn't you?

A. We did.

Q. And you didn't do that, did you?

A. We did not.

Q. You had the right -- excuse me -- back in 2012 -- pardon me -- in 2012 to partner with another company and to build product using the technology that you say is so foundational and so important and put out products for people to buy, didn't you?

A. We did.

Q. And you didn't do that in 2012, did you?

A. We did not.

Q. In fact, you asked Exar Corporation to go into this patent licensing business with you, didn't you?

A. We offered them that opportunity.

Q. You offered Exar the opportunity not to do product but actually join you in this business of going out and trying to license this technology rather than build it?

A. I don't agree with that characterization.

Q. Did you -- excuse me.

MR. GILLAM: May I have some more water?

Q. (By Mr. Gillam) Did you -- excuse me.
Did you offer Exar the -- Exar Corporation the opportunity of joining you in this licensing business?
A. We did not.
Q. What did you offer Exar the opportunity to do, to join you, how to join you?
A. Well, if -- well, first of all, I would disagree with the characterization of join. So I -- I would say that we did not offer them to join us at all.
Q. Well, what was the deal that you proposed to them, other than just purchasing -- purchasing these patents?
A. Sure. They -- if they wanted to, if they agreed with us that the value of the portfolio was more than $875,000, we offered them to keep a 50 percent -- I believe it was a 50 percent profit share, as we got licensees. They were in a position where they needed cash as a company. The cash was more important to them, and they took $875,000 instead of a profit share. But we did not offer them to join us.
Q. So isn't -- isn't it a fact, then, that you offered them a 50 percent share in your licensing venture?
A. No.
Q. Okay. The fact is Exar Corporation was about

to let these patents expire or abandon these patents at the time that you purchased them, weren't they?

A. No.

Q. Isn't it true, Mr. Vachon, that Exar Corporation, back in 2012, wasn't even willing to pay the maintenance fees on these patents?

A. When we acquired the patents, the maintenance fees on the U.S. -- 10 U.S. patents were current. I believe there were a couple of maintenance fees that were not paid for some of the foreign patents, but they were -- it's like being current on your real estate taxes, they were current.

Q. Okay. How much does it cost to -- in maintenance fees in U.S. patents, do you know?

A. We pay them in aggregate so I don't really know. It's tens of thousands of dollars --

Q. For --

A. -- per year.

Q. For aggregate, correct?

A. Yes, sir, I don't -- I don't know the exact number.

Q. In addition to manufacturing products and building things with this technology back in 2012, you would have had the right as the patent owner to sell products using this technology that you've talked about

today, correct?
A. Yes.
Q. And you did not do that either?
A. I think you asked me that question already, but the answer is we did not.
Q. Okay. Not only in 2012 did you not do that, you didn't make or sell anything that you had the right to do in 2013, did you?
A. I don't believe that's required under patent law.
MR. GILLAM: Objection, nonresponsive.
THE COURT: Sustained.
You need to limit your answers to the questions asked, sir.
THE WITNESS: Yes, sir.
THE COURT: Let's proceed.
Q. (By Mr. Gillam) You didn't make any product or sell any product based on the technology that you have in this case that we're talking about here in 2013, did you, sir?
A. We did not.
Q. You didn't do it in 2014 either, did you?
A. We did not.
Q. You hadn't made anything in 2015?
A. I'm sorry, could you be more clear on your

question?

Q. Yes, sir.

You didn't make or sell any product based on the technology that this jury here is concerned with today in 2015, 2016, or 2017?

A. That is correct.

Q. The mechanism that you use in your business is to identify companies that you believe is -- are using your technology and then go out and try to get them to take a license; is that right, sir?

A. Yes, sir.

Q. Now, when you were at -- was it called Liberate?

A. Yes, sir.

Q. Were you involved in license negotiations?

A. Could you ask -- be a little more precise, please?

Q. Sure. I'm sorry.

When you were at Liberate, were you involved in the -- in the -- in patent licensing business?

A. No.

Q. Okay. Well, you are aware that there are situations in -- in technology companies where companies sit down across the table from one another and actually negotiate licenses, are you not?

A. They're called cross-licenses.
Q. Okay. And companies actually negotiate with each other and say we're going to take a license to your -- we're going to -- we need your product, and we're going to take a license to your product, and we're going to pay you a fee for that license. Happens all the time, doesn't it?
A. You lost me there. Could you -- I'm sorry to make you do that again, could you try that again?
Q. Certainly.
You're aware that in technology companies and a lot of other different kind of companies, it is common for companies to negotiate with one another as to whether or not one company takes a patent license from another, the other company pays a fee for that license?
A. That's correct. That happens all the time.
Q. Happens all the time?
A. Yes, sir.
Q. Okay. And it happens a lot of times without lawsuits, doesn't it, Mr. Vachon?
A. Yes.
Q. Okay. Now, here, you bought this company in 2012 -- the patents, rather, in 2012?
A. That's correct.
Q. How long was it before you determined that you

believed Sandvine was infringing upon your patents?
A. I believe that would be roughly about the date that we filed our litigation, which I don't have in front of me, I'm sorry.
Q. February 2016, does that sound about right to you?
A. Sounds about right.
Q. All right. Now, before you filed your lawsuit against Sandvine, did you write Sandvine a letter and say, Sandvine, we believe you're infringing upon our intellectual property, and we think you ought to pay us a license?
A. I'm sorry, was that question before the lawsuit?
Q. Yes, sir.
A. No, we did not.
Q. Mr. Vachon, this is Mr. Caputo over here. Have you met Mr. Caputo before?
A. Several times.
Q. Okay. Before you decided to sue his company, did you call Mr. Caputo up and say, we think you're infringing upon our property, and we think you need to pay us a license?
A. I did not.
Q. Could you have done that if you had wanted to?

A. Yes.
Q. The first contact that you had with Sandvine would have been when you served your lawsuit papers on them; is that correct?
A. That's correct.
Q. Now, besides bringing this lawsuit against Sandvine, you have another connection with Sandvine, do you not?
A. I do or I did.
Q. Okay. In fact, what you did was you went out and bought shares in Sandvine, correct?
A. We did.
Q. Not only you, but Mr. Brunell back here, went out and bought stock in this company?
A. We did.
Q. Now, did you buy the stock in this company before or after you sued them?
A. I don't recall.
Q. You don't recall -- you -- you know you filed your lawsuit in February 2016?
A. Uh-huh, yes.
Q. And you went out and bought a hundred shares personally, did you not?
A. I don't know the number of shares offhand, but it was roughly about that.

Q. Okay. And Mr. Brunell over here went out and bought a hundred shares of Sandvine's stock, too, approximately?

A. Approximately.

Q. What about Ms. Guse?

A. I have no knowledge that she bought shares or not.

Q. Okay. So between the two of you, you've gone out and bought around 200 shares of Sandvine stock, and you can't tell these folks on the jury whether it was before or after you sued this company?

MR. DAVIS: Objection, Your Honor, relevance.

THE COURT: Do you have a response, Mr. Gillam?

MR. GILLAM: Absolutely, Your Honor. What the evidence is going to show is not only did they go out and purchase stock in Sandvine, but then they began a campaign of contacting analysts and contacting Sandvine's in-house counsel in an effort to pressure this company into negotiating a license with them through the vehicle of being stockholders in Sandvine.

MR. DAVIS: Your Honor, that's not relevant to any issue in this case.

THE COURT: I'll sustain the objection.

I don't see the relevance to the issues before the Court.

Q. (By Mr. Gillam) Mr. Vachon, you told --

THE COURT: Counsel, approach the bench, please.

(Bench conference.)

THE COURT: There's a willfulness claim here, does this go to willfulness? I'm trying to figure out what this is relevant to other than to make him look bad.

MR. GILLAM: The actions -- the -- well, the actions of this company --

THE COURT: I know that's what you're trying to do.

MR. GILLAM: The actions of this company -- or the actions of these men and going out after the fact or before the fact, we don't know which one it is, and I don't know which one it is, going out and buying stock in a -- in a company that you've actually got a lawsuit against and then going out and trying to muscle them into negotiating some settlement with you by going -- by calling up their in-house -- by calling up their in-house counsel, the actions of a company, the actions of this man, and this other fellow out here doing that is not relevant, I think it's

absolutely relevant. Not to the issues of --

THE COURT: To what issue?

MR. GILLAM: To the issues of the character of these men doing what they're doing. What we have -- what we have here, Your Honor, is we've got a company that has brought a lawsuit that doesn't do -- that they don't make any -- we know it's a non-practicing entity. I -- I haven't been calling it that, but the actions or the character of them going down the road of contacting people --

THE COURT: Okay.

MR. DAVIS: Your Honor --

THE COURT: Okay. It's all right. I -- I just wanted a fuller explanation.

I'm going to continue to sustain the objection based on 403. The relevance, if there is relevance to me, is outweighed by the prejudice.

Let's continue.

(Bench conference concluded.)

THE COURT: Let's proceed.

MR. GILLAM: Your Honor, I'm going to go into the Cisco matter at this time. I -- I don't think I need to -- to go into the numbers, so I don't believe it's necessary to seal the courtroom, but I am going to go into the Cisco matter.

THE COURT: So you're telling me you're not asking to seal the courtroom? Are you -- are you asking to seal the courtroom or not?

MR. GILLAM: I don't believe -- well, I tell you what, Your Honor, we are going to go into some of the terms. Perhaps it's best that we do seal it. I would --

THE COURT: All right.

MR. GILLAM: -- ask that it be sealed.

THE COURT: All right. Based on Counsel's objection -- excuse me, request, rather, to seal the courtroom to protect confidential information, I'm going to order the courtroom sealed. As before, this means if you're present and not subject to the protective order in this case, you should excuse yourselves from the courtroom until the courtroom is unsealed and reopened.

(Courtroom sealed.)

(Testimony filed under seal by order of the Court.)

(Courtroom unsealed.)

THE COURT: The Defendant having passed the witness, Mr. Davis, do you have redirect?

MR. DAVIS: I do, Your Honor.

THE COURT: You may proceed to the

podium. All right. We'll proceed with redirect.

MR. DAVIS: Thank you, Your Honor.

REDIRECT EXAMINATION

BY MR. DAVIS:

Q. Mr. Vachon, you were asked on cross-examination whether Cisco is a bigger company than Sandvine. Do you recall that?

A. It was a few minutes ago, yes, I do.

Q. Okay. And do you know whether Cisco is a bigger company than Sandvine in the network monitoring market?

A. Apparently not. Apparently Sandvine's larger than Cisco in the network monitoring market.

Q. And so when you were asked about whether Cisco was a larger company, that included all of Cisco; is that what you're saying?

A. I believe that's what Mr. Gillam was asking.

Q. Okay. And so in the relevant market, between Cisco and Sandvine, who is bigger?

A. Sandvine.

Q. Now, you were asked also some questions about the amount of money that -- that Packet Intelligence has made so far?

A. Uh-huh.

Q. And Mr. Gillam asked you to add the Cisco

settlement and the amount that you're asking for in this lawsuit together. Do you recall that?

A. I do.

Q. I want to be clear, if -- if the jury awards damages in this case, do you get to keep -- you and Mr. Brunell get to keep all that money?

A. I wish. We are like a regular business. We have expenses. We re-invest in our business like a regular company, and we -- yes, the three of us will keep some of it because we have expenses, as well. But the notion that we're just going to take $14 million and -- is -- is not correct.

Q. And, I mean, you've got expenses associated with this lawsuit, don't you?

A. We do, significant.

Q. How many years have you been fighting this lawsuit?

A. Well, we filed, I guess, in September of '15.

Q. And -- and we all know lawsuits are expensive; is that right?

A. All you have to do is look around the room.

Q. Now, a lot of criticism has been made about the business that Packet Intelligence is in. You mentioned earlier in your direct testimony a company called IBM. Who is IBM?

A. International Business Machines, large computer -- hardware and software company.
Q. Now, does IBM make any products?
A. Yes, they do.
Q. Okay. Do they currently make any products?
A. Of course, yes.
Q. Okay. Do they have patents?
A. They're a large patentholder.
Q. Okay. Do they enforce their patents?
A. Yes, very much.
Q. Do you know whether they enforce their patents based upon products that they make or not?
A. IBM, like many large technology companies, has -- have advanced research and development centers, and sometimes they create technologies that they don't use, and they patent that technology, and they enforce their patents.
Q. Okay. What about universities, do you know whether universities have patents?
A. Maybe.
Q. Do you know whether the law requires universities to make products before they can enforce their patents?
A. I'm not aware of any law like that.
Q. Are you aware of any law, whatsoever, that

would require you as an owner of patents to make a product before you're entitled to enforce that patent?

A. Absolutely not.

Q. Are you aware that East Texas is a big oil and gas industry, sir?

A. I am.

Q. Are you aware that you can own land that may have oil on it?

A. Of course.

Q. And if you own land that may have oil on it, do you have to be in the oil and gas business to make money from those minerals?

A. No, you can let it sit there if you'd like.

Q. Are you aware, sir, whether there's -- whether there is any relevance at all to the question of infringement in this case as to whether or not Packet Intelligence makes a product?

A. No, I'm not aware of any reason like that.

Q. Are you aware of whether the law -- the law only protects the rights of companies that make products?

A. Based on my understanding, my rights as a patent owner, as a non-manufacturer of product and a manufacturer of product are exactly the same.

Q. What about the number of people that a company

or an individual employs, does that have relevance in the -- in the eyes of the law?

A. There's nothing in any law that I know of that requires in either one or 500 employees to enforce the rights of my patents.

Q. When you were doing your due diligence into this case and determining whether or not Sandvine infringed, was there any reason for you to inquire about whether the fact that Packet Intelligence had fewer employees than Sandvine would mean anything in the relevance of this case?

A. Has nothing to do with anything.

Q. Mr. Gillam on cross-examination asked you about your due diligence prior to filing the lawsuit against Sandvine, and he asked whether you were aware that Sandvine had sold a PTS product back in 2002. Do you recall those questions?

A. I do.

Q. Do you know whether that product that was sold in 2002 is accused in this lawsuit?

A. I actually don't.

Q. Okay. Do you know what the date of first infringement -- excuse me, do you know what the date is that Sandvine began infringing these patents?

A. I -- I'm sorry, I don't have that detail.

Q. Okay. Do you know whether that date is in 2006?

A. I'm -- I -- I really don't know the answer to that, Mr. Davis.

Q. You were asked on cross-examination about whether Mr. Dietz or the other inventors will receive any -- any -- any of the money from any award that the jury may or may not award in this case, do you recall that?

A. That's -- I do recall that question.

Q. What does it say about Mr. Dietz that he came out here to testify even though he was not going to share in any award?

A. Well, I doubt Mr. Dietz did it for the money, because we're only paying him an hourly consulting rate. I think he is proud of what he invented, and he is -- it's part of his legacy as a technologist, and I think he's interested in seeing the patents properly explained.

Q. Mr. Vachon, you were asked on cross-examination about whether you contacted Sandvine before filing this lawsuit.

Did you reach out to Sandvine at all in this case?

A. We did immediately after filing the lawsuit.

Q. Can you tell us a little bit about that?
A. Yes. We constructed -- we, being Mr. Brunell and I, constructed a letter based on the article that was in the Waterloo newspaper, which is where Sandvine is headquartered, that contained some quotes by Mr. Caputo that were traveling to us. And we wanted to correct the record, and we -- at the end of the letter, we offered to sit down and meet with him.
Q. And did you receive any response to that letter?
A. No.
Q. Now, later on in this case, you did actually go meet with Mr. Caputo, didn't you?
A. I did.
Q. And when was that?
A. That was sometime this summer, July, early August it feels like.
Q. Okay. And how did you --
MR. GILLAM: Your Honor, may we approach?
THE COURT: Approach the bench, Counsel.
(Bench conference.)
MR. GILLAM: I'm not sure where he's going, but the meeting I'm aware of was a mediation.
MR. DAVIS: I'm not going to the mediation. I'm not talking about the mediation. You

were worried about the --

THE COURT: What is the relevance of all this?

MR. DAVIS: Well, he criticized our -- Packet Intelligence for not --

THE COURT: And you've -- and you've said that he did go meet with him.

MR. DAVIS: He -- but he flew up there, and he met with him. And he offered him $4 to settle this -- he offered him $1, and then he offered them $4. So they -- we've been criticized as not being reasonable actors in this case. I'd like to be able to correct that impression by saying we flew all the way up there to meet with him. We sat down. We tried to have a rational discussion, and Mr. Caputo, basically, well -- gave us $1.

MR. GILLAM: You cannot get into settlement negotiations. It doesn't matter whether it's $1, $4, or a million dollars.

MR. DAVIS: I believe he's opened the door to that, Your Honor, by criticizing us for not reaching out. What is that but settlement negotiations?

THE COURT: Well, he's -- he's criticized you for not reaching out, and you're entitled to respond by showing he did reach out. But the terms of the reach

and the response are not acceptable.
MR. DAVIS: Okay.
THE COURT: All right?
MR. DAVIS: All right. Thank you.
THE COURT: Let's continue.
(Bench conference concluded.)
THE COURT: Let's proceed, Counsel.
Q. (By Mr. Davis) Now, did you go -- fly all the way to Ontario, Canada to meet with Mr. Caputo?
A. I flew to Detroit and drove.
Q. Okay. And were you able to resolve the case at that time?
A. We were not.
Q. Okay. But that wasn't from lack of trying on your part, was it?
A. I flew a long way.
Q. Now, do you know -- you were also asked about -- on cross-examination about your time at Liberate. Do you know whether Liberate had a pre-suit licensing discussion with the company that ultimately sued Liberate?
A. We did not. They just sued us.
Q. Did that bother you?
A. Not really. It's just the way business works in the patent world.

Q. Did it bother -- did it bother you that they didn't reach out to you first before filing that lawsuit?

A. Not really.

Q. Okay. Why did you file the lawsuit and then reach out to Mr. Caputo and Sandvine as opposed to reaching out first?

A. Well, in my experience, the -- when companies like ours go and seek licenses, as I said earlier, it's not always a happy conversation, and people avoid you. But one way to make them not avoid you is to sue first and then offer to open discussions, and that's the approach that we used.

Q. Back to the Cisco agreement, you were also asked whether there was a difference between the amount of patents included in the Cisco agreement versus the amount -- the number of patents at issue in this lawsuit, do you recall that?

A. I do.

Q. Do you know whether Mr. Bergman in his damages analysis accounted for the fact that there were different numbers of patents?

A. Yes, he analyzed the Cisco agreement carefully.

Q. Okay.

MR. DAVIS: Your Honor, at this time I pass the witness.

THE COURT: All right. Additional cross, Mr. Gillam?

RECROSS-EXAMINATION

BY MR. GILLAM:

Q. Mr. Vachon, you've used the term "that's the way things are done in the patent business" on a number of occasions, and I want to ask you about that.

The reality is, is that had you chosen to try to negotiate a license with Mr. Caputo before you filed a lawsuit, you had that option, correct?

A. I did.

Q. You had the option as the owner of the patent of building products with these fine foundational patents that they've talked about today?

A. I did.

Q. You had the option of selling products with these patents as we've talked about today?

A. Yes, sir.

Q. And you've done none of that?

A. That's correct.

Q. And when you talk about where the money is going back into the business, the reality is, the business that you're talking about is a business of

targeting these companies that you think use these patents and going out and bringing -- trying to license them, correct?

MR. DAVIS: Objection, Your Honor, relevance and prejudicial.

MR. GILLAM: Response, Your Honor?

THE COURT: Just a minute.

What's your response?

MR. GILLAM: He has talked at length about his patent licensing business and how they go about it. They went through the -- the -- the pre-suit investigation, the post-suit investigation, and it's all about looking at who they think is using their product, and then going out and trying to license it. That's all I'm asking him about.

MR. DAVIS: Your Honor, he's using words like target and those -- those types of words are highly prejudicial, and they don't have any relevance to the issue in this case. I would ask that he be -- he's made his point, and I believe it's time to move on.

THE COURT: Well, I'm the one sitting up here, you're not, Counsel.

MR. DAVIS: Understood, Your Honor.

THE COURT: I'll overrule your objection.

Ask your question again, Mr. Gillam.

The objection is overruled.

Q. (By Mr. Gillam) Mr. Vachon, your business today and the business of Packet Intelligence is not manufacturing or building or selling at all, is it?

A. That's correct.

Q. Your business today is finding companies that you want to take a license and going and trying to get them to take a license, correct?

A. That's right.

Q. And the mechanism by which you have done that in every instance so far is to go out and sue first and talk later, correct?

A. That's correct.

Q. And as far as where the money's going to go or where the money has gone, that money is going back into Packet Intelligence, correct?

A. It's going back into my company, yes.

Q. And your company has got three people in it, correct?

A. It does.

MR. GILLAM: That's all, Your Honor, I have. Pass the witness.

THE COURT: Anything further, Mr. Davis?

MR. DAVIS: Yes, Your Honor, brief. Thank you.

THE COURT: Proceed with your redirect.

MR. DAVIS: Thank you, Your Honor.

FURTHER REDIRECT EXAMINATION

BY MR. DAVIS:

Q. Mr. Vachon, again, to your knowledge, does building a product, selling a product, manufacturing a product have anything to do with whether Sandvine is using your property?

A. It has no -- no relationship at all.

MR. DAVIS: Thank you, Your Honor. I pass the witness.

THE COURT: Mr. Gillam, anything further?

MR. GILLAM: No, Your Honor, nothing further.

THE COURT: Mr. Vachon, you may step down.

THE WITNESS: Thank you, Your Honor.

THE COURT: Ladies and gentlemen, we're going to take a short recess. I'll try to keep this short. You may leave your -- your books in your chairs -- not your chairs in your books. You may leave your books in your chairs. Use this opportunity to stretch your legs and get a drink of water, and we'll be back in here shortly.

The jury is excused for recess at this

time.

COURT SECURITY OFFICER: All rise for the jury.

(Jury out.)

THE COURT: Let me see lead and local counsel in chambers.

We stand in recess.

(Recess.)

(Jury out.)

COURT SECURITY OFFICER: All rise.

THE COURT: Be seated, please.

Plaintiff, are you prepared to call your next witness?

MR. DAVIS: We are, Your Honor.

THE COURT: All right.

MR. DAVIS: It will be a deposition witness.

THE COURT: All right. Is that Mr. Donnelly?

MR. DAVIS: It is, Your Honor.

THE COURT: And how long do you expect the deposition to last?

MR. DAVIS: It will be 18 minutes, Your Honor, and all that time will be allocated to the Plaintiff.

THE COURT: All right. Let's bring in the jury, Mr. Elliott.

COURT SECURITY OFFICER: Rise for the jury.

(Jury in.)

THE COURT: Welcome back, ladies and gentlemen. Please have a seat.

Plaintiff, call your next witness.

MR. DAVIS: Thank you, Your Honor.

Packet Intelligence calls Mr. Thomas Donnelly by deposition. Mr. Donnelly is the chief operating officer, sales and global services for Sandvine, and was deposed on February 23rd, 2017.

The video is 18 minutes and 3 seconds, and all of that time is allocated to Plaintiff, Your Honor.

THE COURT: All right. Let's proceed with the witness by deposition.

(Videoclip playing.)

QUESTION: And could you please state your name and work address for the record, please?

ANSWER: My name is Tom Donnelly, and my work address is 408 Albert Street, Waterloo, Ontario, Canada.

QUESTION: And you are presently employed

by Sandvine?

ANSWER: Yes, I am.

QUESTION: Is there also PTS software that is sold together with the hardware PTS product?

ANSWER: I think that Sandvine manufactures both hardware and software.

QUESTION: Sure.

ANSWER: And we sell software that runs on the PTS. I think for a very specific explanation of those products and features our marketing literature and documentation would -- would probably be a -- the best place to look.

QUESTION: Okay.

ANSWER: But generally, yes to your question.

QUESTION: I'm sorry. Okay. So other than the base node lock software or license, you're -- you're not aware of any other software that runs on the PTS hardware?

ANSWER: Technically, where the licenses run is something I wouldn't be comfortable answering, because I'm not sure. But there are software licenses we sell in association with. Where they run, I think Don would again --

QUESTION: Okay.

ANSWER: -- be able to give you a --
QUESTION: Don Bowman?
ANSWER: -- more accurate answer.
QUESTION: And are you -- are you comfortable identifying what or which Sandvine software products use data or information generated by the PTS hardware product?
ANSWER: No, I wouldn't be comfortable with that level of detail.
QUESTION: In your position as COO for Sales and Global Services, do you personally communicate with present or future customers regarding the capabilities of the PTS hardware product?
ANSWER: I would say my interaction with customers, which is part of my job, beyond the operational management of the individuals who report to me, you know, as the sales leader, I set targets, I measure and manage the realization of those goals, set up the sales plan and -- and whatnot.
My engagement with the customers is very much focused on the relationship side of things to make them feel comfortable that Sandvine is a company that they can do business with. It doesn't really -- certainly primary engaged in discussions about the relative specifics of the product.

QUESTION: And sitting here today, do you have a sense of who the biggest clients are in terms of dollar amounts with respect to Sandvine products or services?

ANSWER: Over what period of time?

QUESTION: Oh, let's just say the most recent, let's say one-year period.

ANSWER: I think the -- obviously, as a publicly-traded company, we -- we make available data on our customer mix and -- and concentration. That's probably a good -- a good record.

QUESTION: And -- and let me clarify. I'll be -- I'm primarily interested in customer -- Sandvine customers who have the highest dollar amounts with respect to sales in the United States.

ANSWER: In the United States, I can say historically, our largest customers would include people like Comcast and Cablevision and -- and the like.

QUESTION: Do you recall what sorts of products and services you -- well, Sandvine has sold to Comcast in the United States?

ANSWER: Not specifically, but they would involve -- I could say they would involve the PTS.

QUESTION: Just going back a little bit.

You mentioned that Comcast was one of the

larger Sandvine customers in the U.S. Other than Comcast, can you recall any others -- largest Sandvine customers in the U.S.?

ANSWER: Cablevision, which is now owned by Altice.

QUESTION: Anyone else?

ANSWER: Time -- Time Warner.

QUESTION: Anyone else that you can recall?

ANSWER: Charter Communications.

QUESTION: Anyone else?

ANSWER: GCI.

QUESTION: Okay. Anyone else?

ANSWER: Cricket Communications.

QUESTION: And when did you first -- when were you first responsible for marketing materials six or seven -- that you performed six or seven years ago, when -- when did that responsibility commence?

ANSWER: So by training by background, I'm not an engineer. So when we started the company in 2000, my focus was on -- really on the non-technical aspects of the business. And for that initial period, one of the roles I had was in -- in -- with responsibility for the marketing function. And my comment with regards to the -- the distinction between

marketing and product management was that kind of delineation between technical marketing and more -- call it market communications and -- and branding and things like that, which is more in my domain.

So I would have had that role. And you'll forgive me, the exact dates, to the best of my recollection, it would have been until five or six years ago, at which time I took responsibility for global Services and transitioned the marketing function to -- Don Bowman.

QUESTION: So let me direct you again to Exhibit 5.

ANSWER: Sure.

QUESTION: And in this marketing document, there is some discussion in the first sort of main paragraph regarding the Policy Traffic Switch, PTS, that we've identified previously, a Service Delivery Engine, an SDE, and a Subscriber Policy Broker, an SPB.

Do you see those sections?

ANSWER: I do.

QUESTION: Do you have an understanding of the basic functionality provided by those -- what this document calls components?

ANSWER: At the level that's expressed in this document, yes. So, yes, at the level expressed in

this document.

QUESTION: Okay. And do you agree with the statements set forth here in this paragraph about the -- the functionality of these particular components and how they work together?

ANSWER: Let me just read them and --

QUESTION: Sure.

ANSWER: They are consistent with my understanding of -- of how the products work.

QUESTION: Sure. So -- so you agree that these three products or components work together in concert to implement network management policies.

ANSWER: I can only say that they -- they don't describe exactly how they work. They talk more about a high level description of kind of what they are. So I'm not sure if I can expand further upon what's said there.

QUESTION: You have no reason to disagree with this document's characterization of these three products as -- as being three components that work together in concert to implement network management policies?

ANSWER: I would only say that they're consistent with my understanding.

QUESTION: So just so I'm clear, it's the

marketing department's -- it's primarily, if not exclusively, the marketing department that creates the marketing materials for Sandvine and not anyone within the sales department under your purview?

ANSWER: Correct.

QUESTION: And is it your understanding that Sandvine itself developed the technology that came to be known or in or through the Policy Traffic Switch hardware product?

ANSWER: Yes, that is my understanding.

QUESTION: Okay. Mr. Donnelly, I've marked as Exhibit 6 a Sandvine document with Bates Nos. Sandvine 0003174 to 75. If you would just take a few moments to review that document.

ANSWER: Yes, thank you.

QUESTION: Have you seen this document before?

ANSWER: I don't recall. May I ask, is there a date on the document?

QUESTION: It talks about deploying the solution at the top, and it discusses that a customer -- a Sandvine customer already had Sandvine's network policy control solution in place as part of the existing Fairshare Traffic Management deployment, which included the Policy Traffic Switch, PTS, Service Delivery Engine,

SDE, and Subscriber Policy Broker, SPB. Do you see that?

ANSWER: I do.

QUESTION: So this would be an example of a customer who purchased several products and employs them as part of a -- as part of Sandvine's network policy control solution, correct?

ANSWER: I would -- I'm not aware of who the customer this is referring to. And I think from my reading of this document, what it's describing is the different products that they've deployed in their network, but it's not clear to me the specific function for each of them or to what extent, what the -- when they were deployed and for what purpose.

QUESTION: So this customer, as part of their existing Fairshare Traffic Management deployment, had Sandvine's network policy control solution in place, and that deployment included the PTS, the SDE, and the SPB that are described here, correct?

ANSWER: The -- the paragraph clearly states that the customer had previously deployed Fairshare Traffic Management, the Policy Traffic Switch, and the SDE.

QUESTION: Who are Sandvine's competition when it comes to their -- Sandvine's products and

services?

ANSWER: Depends which products. So you -- can you tell me specifically what product you're referring to?

QUESTION: Sure. Let's start with the PTS products and the software that runs on it.

ANSWER: Our traditional or our traditional competitor it's -- I would say our competitors in that space is being Allot Communications, Procera Networks.

QUESTION: Anyone else that you can think of?

ANSWER: More historically, Cisco via their acquisition of -- it's an Israeli company. They had a product called the SCE. I forget the name of the company they acquired in relation --

QUESTION: Can you maybe just spell the name of the product?

ANSWER: SCE.

QUESTION: Okay. Anyone else?

ANSWER: Those are the ones that come to mind.

QUESTION: With respect to professional services and -- and support, maybe just to clarify, you indicated Sandvine provides training, or is it correct

that Sandvine provides training, setups, and instruction to its customers for its various products and services?

ANSWER: We sell training that -- both to customers and partners, but primarily to end customers, which relate to the operation of our products, so they're more operational training, how to turn it on, how to configure it sort of thing.

QUESTION: What about installation, are -- is -- strike that.

Does Sandvine typically install the products that it sells to its customers?

ANSWER: We do sell installation and commissioning. Some customers hire us to do that. Others do it themselves. Typically -- I don't know what the percent -- percentage split is between those that do it themselves and hire us.

QUESTION: But to the extent you don't -- to the extent Sandvine doesn't do it itself, the installation, that is, certainly it instructs the customers how to install it themselves?

ANSWER: If we don't do it, the customer does it themselves or they hire our reseller to do it. Those would be the three categories of -- to the extent the equipment is installed and commissioned, it's done by us, our customer themselves, or our partner.

QUESTION: If Sandvine itself doesn't install the products that it sells to its customers or if the reseller itself doesn't install the products, Sandvine products it sells its customers, does Sandvine provide installation instructions to customers?

ANSWER: I'm not sure of what the makeup of our -- we do provide documentation, product documentation. I'm unaware of whether that includes installation instructions.

QUESTION: How would you find out whether it does or doesn't?

ANSWER: I would read the installation instructions.

QUESTION: Okay.

ANSWER: Oh, sorry, I would read the documentation to find if -- out if it included installation instructions. I apologize.

(Videoclip ends.)

THE COURT: Does that complete this witness by deposition?

MR. DAVIS: It does, Your Honor.

THE COURT: All right. Plaintiff, call your next witness.

MR. DAVIS: Plaintiff calls Mr. Dave Caputo to the stand.

THE COURT: All right. If you'll come forward, Mr. Caputo.

You've previously been sworn.

And if we have binders to pass out, let's get that done.

MR. HARTSELL: May I approach?

THE COURT: You may.

All right. Mr. Skiermont, you may proceed with direct examination.

MR. SKIERMONT: Thank you, Your Honor.

DAVID CAPUTO, PLAINTIFF'S WITNESS, PREVIOUSLY SWORN

DIRECT EXAMINATION

BY MR. SKIERMONT:

Q. Good afternoon, Mr. Caputo.

A. Good afternoon.

Q. I don't believe we've ever met, have we?

A. I think we met briefly at the voir dire.

Q. Oh, that's right. Thank you for reminding me. And you're the CEO of Sandvine?

A. I was until recently.

Q. You're the non-executive chairman of the board of Sandvine currently?

A. I am, yes.

Q. And you had your deposition taken in this case, correct?

A. I did.
Q. And that was in May of 2017?
A. Yes.
Q. And as of that time, anyway, or until that time or maybe some time after, you were the primary decision-maker at Sandvine about this lawsuit, correct?
A. Yes.
Q. Do you have any -- are you the listed inventor on any patents anywhere in the world?
A. I am not.
Q. Have you ever carefully reviewed the patents that are in this case?
A. I have.
Q. As of the time you were deposed in May of 2017, have -- had you carefully reviewed the patents in this case?
A. No.
Q. And in May of 2017, the litigation had been going for well more than a year, correct?
A. Correct.
Q. And as of May of 2017, Mr. Caputo, had you reviewed carefully the Court's claim construction order?
A. I would say I skimmed it.
Q. And that's also what you would say you had done with the patents as of May 2017, correct, skimmed?

A. Through some sleepless nights, yes.
Q. And did you compare, after skimming the patents and the Markman, did you compare the patent or the Court's definition of the terms to any Sandvine products?
A. I -- I read them and understood them as best I could.
Q. Did you try to figure out if what was claimed in the patent was part of what was in your product?
A. Yes.
Q. With who?
A. With our chief technology officer, one of my co-founders, Don Bowman.
Q. And that's Mr. Bowman.
And when did you -- when did you do that work?
A. I would say we found out about the lawsuit on February 17, 2016, and I would say it was within four or six weeks of that after -- we spoke about it often.
Q. And did you conclude after those four to six weeks after you were sued that Sandvine did not infringe?
A. Yes.
Q. And you came to that conclusion six weeks after you were sued based on conversations with Mr. Bowman?

A. Yes.
Q. Were you surprised to see Mr. Bowman feature -- Mr. Bowman's testimony so prominently in Dr. Almeroth's infringement presentation?
A. No.
Q. I'm sorry, I didn't mean to interrupt. Go ahead.
A. No.
Q. You were in the courtroom for Dr. Almeroth's infringement testimony, correct?
A. I was.
Q. Other than Mr. Bowman and your outside counsel, did you rely on anyone else in formulating your non-infringement opinion six weeks after the case was filed?
A. At that point, it would have been exclusively with discussions with Don, Don Bowman.
Q. And when did you compare the patents and the Court's Markman order to the Sandvine products?
A. It would have been when those Markmans were prepared. I don't recall the date.
Q. And is it your testimony, Mr. Caputo, that you compared the Markman and the patents to Sandvine's products prior to May of 2017?
A. I'll say I read them and tried to understand

them as best I could relative to our products.
Q. Did you compare the patent or the Markman to the products?
A. No.
Q. Does Mr. Bowman have any patent training?
A. He certainly has a lot of patents.
Q. You mean he's had patents issued to him?
A. That's right.
Q. Has he ever done an infringement analysis before this case?
A. Not that I'm aware of.
Q. Mr. Bowman is not an expert on the technology disclosed in the Packet Intelligence patents, is he?
A. I would consider him an expert.
Q. You would consider him an expert -- an expert in Packet Intelligence's patents?
A. I would now, yes.
Q. And when do you think he became an expert in Packet Intelligence's patents?
A. It started when we got sued, and we looked up these things over and over and over again.
Q. I think you've already said, Mr. Caputo, you recall being deposed in this case in May of 2017?
A. I do.
MR. SKIERMONT: Could you call up,

please, Ms. Vogtman, XZ1086.1? Put it on the screen.

Q. (By Mr. Skiermont) Mr. Bowman, when your -- I'm sorry, Mr. Caputo, when your deposition was taken, you were under oath, correct?

A. I was, yes.

Q. And were you asked at your deposition when you were under oath: Do you think he's a technical expert on the technology of the Packet Intelligence patents?

Were you asked that question?

A. I was.

Q. And you -- and did you answer under oath: No, I think he is a technical expert on the way we do things.

Did you give that answer under oath?

A. I did.

MR. SKIERMONT: You can take it down.

Q. (By Mr. Skiermont) Have you -- as of May 2017, which would have been several months after your non-infringement conclusion, had you ever spoken to Dr. Nettles, a Dr. Nettles?

A. I had not.

Q. In fact, in May -- as of May of 2017, you didn't even know what Dr. Nettles' name was, correct?

A. That's correct.

Q. In your -- actually, Comcast is a United

States customer of Sandvine's, correct?
A. Correct.
Q. And you sell them PTS products?
A. Did you say PTS products?
Q. Yes, sir.
A. Yes.
Q. And you sell them those PTS products in the United States, correct?
A. Correct.
Q. Comcast uses Sandvine's PTS products in the United States, correct?
A. Correct.
Q. Comcast is Sandvine's largest U.S. customer, right?
A. I believe historically, that's true.
Q. Who's a close second?
A. All the large U.S. cable companies. Quite a few of them use them, so Time Warner is probably a close second.
Q. And Time Warner -- Sandvine sells Time Warner PTS products, correct?
A. Correct.
Q. And it sells them those products in the United States, correct?
A. It -- we do.

Q. And Time Warner uses those products in the United States, correct?
A. Correct.
Q. And I think we also saw in the video a moment ago from Mr. Donnelly that Cablevision is a customer of Sandvine; is that right?
A. Yes.
Q. And Cablevision -- does Sandvine sell PTS products to Cablevision in the United States?
A. Yes, we did, and we do.
Q. And Cablevision uses PTS products in the United States, correct?
A. Correct?
Q. How about GCI? They're a Sandvine United States customer, right?
A. They are.
Q. And Sandvine sells GCI PTS products, right?
A. I believe we do, yes.
Q. And GCI uses those products in the United States, correct?
A. Correct.
Q. How about Cricket? Does Sandvine sell PTS products to Cricket in the United States?
A. Not anymore.
Q. Did they at one time?

A. We did, yes.
Q. When did you stop?
A. Cricket was acquired by AT&T, I believe, and they stopped using our product at that time.
Q. Do you know when that was?
A. I don't recall when AT&T bought them, no.
Q. What about Charter, does Sandvine sell Charter PTS products in the United States?
A. We do.
Q. And Charter uses those products in the United States?
A. We do.
Q. Charter --
A. I mean they do, I'm sorry.
Q. Thank you.
Mr. Caputo, do you recall an interview that you did in June of 2008 with CBC News? I think you were asked about it at your deposition.
A. I -- I believe I recall that interview, yes.
Q. What's CBC News?
A. CBC is the Canadian Broadcasting Corporation. It's the -- Canada's national broadcaster.
MR. SKIERMONT: If you could bring up PTX-284, please. And turn to the second page. And if you could go down to the middle where Mr. -- it says

Caputo, colon, I hope, and it's just that first paragraph. Call it out. Thank you.

Q. (By Mr. Skiermont) Mr. Caputo, you were interviewed by CBC News?

A. Yes.

Q. And did you tell CBC News in Plaintiff's Exhibit 284 that you hope you said -- I believe it's your products -- go as deep as you need to go because there's no point to going any deeper than you need to. If you can figure out in the first byte that it's web surfing, get on with your life, there's another packet coming really quickly.

A. I'm just looking at the context here.

Q. Feel free, please.

A. Yes. I answered that to how deep is deep, yes.

Q. And in that interview, I believe you also explained that -- you said something to the effect of that application developers have no honor when you were talking about them masking ports for where the connections might come from for an application. Do you recall that?

Actually I'll -- I'll -- that's probably unfair.

MR. SKIERMONT: Ms. Vogtman, would you

please take it -- take down the callout that's up and bring up the paragraph that starts the gamers, which is just below that?

Q. (By Mr. Skiermont) Now, what I've called out, Mr. Caputo, is your explanation -- well, withdrawn.

Did you tell CBC News that the gamers, the peer-to-peer file sharers, the malicious hackers figured this out and said, what's the one port no one is going to block? Port 80, because you -- because can you ever sell an Internet service that doesn't allow you to browse?

Did you say that?

A. I did.

Q. And then did you also tell the CBC News that in the workplace, can you have it so that people aren't allowed to web browse? People would rebel pretty quickly to that, so everybody started masqueraded as web traffic on Port 80. It's an antiquated honor system now because there's plenty of application developers that have no honor.

Did you say that?

A. I did say that.

Q. And what you were telling the interviewer from CBC News is that application developers try very hard, or some do, to mask where their connections are coming

from, correct? Where their traffic is coming from, I should say.

A. No, I can't agree with that.

Q. What was the point you were making to CBC News in that paragraph that's on the jury's screen?

A. I was trying to say that they try to mask what the application is.

Q. And Sandvine tries to unmask what the application is with the PTS products, correct?

A. We try to identify the traffic, correct.

MR. SKIERMONT: If you would go -- turn to the next page, please. And call out the top Caputo answer.

Q. (By Mr. Skiermont) Now, Mr. Caputo, did you tell the interviewer from CBC News in Plaintiff's Exhibit 284 that one of the things we're very proud of in our technology is that we can identify traffic by behaviors, signatures, mathematics, or -- or cross -- mathematics of cross packets? Did you tell them that?

A. It looks like a misquote, but I think they just -- they just got something wrong there.

Q. You don't think you told the CBC reporter the sentence that I just read?

A. The mathematics of cross packets doesn't sound like something I would say.

Q. How about that Sandvine can identify traffic by behaviors?
A. Yes, I said that.
Q. And there again, if you'd look at the second paragraph that's on the screen from Plaintiff's Exhibit 284, you told the interviewer: Quite often, applications that are trying to hide understand the computational resources needed to identify them and oftentimes it's cheaper for us to identify them on a behavior basis. We absolutely have that capability. It's inherent in our solution.
Did you tell the reporter that?
A. Yes.
MR. SKIERMONT: You can take that one down, thank you.
Q. (By Mr. Skiermont) Mr. Caputo, Sandvine was founded by a group of five people?
A. Yes.
Q. All former Cisco employees, correct?
A. Yes.
Q. Did you contact anyone at Cisco to figure out why they took a license to Packet Intelligence's patents?
A. I -- I believe we tried to contact them, yes.
Q. You talked to an in-house lawyer one time,

right?
A. Yes, that's right.
Q. And he didn't have any information for you, correct?
A. Correct.
Q. And you never talked to anyone else from Cisco, right?
A. Not about this, no.
Q. As of the date -- as of May 2017 of this year, you had never reviewed any of the filings that occurred in the Packet Intelligence/Cisco case, had you?
A. I'm sorry, can you repeat the question?
Q. Sure. I'd be happy to.
My question was that as of -- and when I'm saying May 2017, I'm -- that's when you were deposed, and so that's why I'm --
A. Thank you.
Q. As of that date, you had not reviewed any of the filings in the Packet Intelligence v. Cisco matter; is that correct?
A. I believe that's correct, yes.
Q. Have you ever reviewed any of the filings in the Packet Intel v. Cisco matter to this day?
A. Can I just ask you to define "filings" for me just so I know what we're talking about?

Q. Sure.
Anything that was submitted to the Court in that case.
A. No, I -- I definitely did not.
Q. Are you familiar with the products that were accused in that case?
A. No.
Q. Have you ever learned what Cisco products were accused in that case?
A. No.
Q. As -- as of May 2017, you did not know how much Cisco had paid to license the PI patents, correct?
A. I did not.
Q. Did you learn that number for the first time today?
A. I did.
Q. And the reason you learned that number for the first time today is because you're the corporate representative of Sandvine and were not excluded from the courtroom when others were, correct?
A. Yes.
Q. And prior to that time, you were not under the protective order and so could not see that number, right?
A. Correct.

MR. SKIERMONT: If you could pull up PTX-344, please.

Q. (By Mr. Skiermont) Mr. Caputo, exhibit -- or PTX-344 is also in your binder if at any time you want to look at the hard copy instead of what I'm showing you on the screen, okay?

A. Thank you.

Q. PTX-344 appears to be an internal Sandvine training document for sales or system engineers, right?

A. Yeah, I think it's probably that, yes.

MR. SKIERMONT: If you could turn to Page 3 and call out traffic -- just the -- the top bullet and the two sub-bullets.

Q. (By Mr. Skiermont) The PTX-344, internal Sandvine training document, says: Traffic classification is the foundation of policy control and business intelligence. You can't manage what you can't measure. Informed decisions require information.

You agree that that's what this training manual says?

A. Yes.

MR. SKIERMONT: If you would turn to Page 4, please. It's the note -- I think there are two Page 4s. The note after the slide.

Next page.

Call that out, please.

Q. (By Mr. Skiermont) Mr. Caputo, in the Sandvine internal training document at PTX-344, it states: In the most basic definition, a signature is a regular expression that is applied to packets. In the most advanced definition, a signature can be a stateful technique that monitors state changes within data and control traffic to extract information required for further identification, e.g., where next data flow will appear.

Is that what this Sandvine internal training document says?

A. It does.

MR. SKIERMONT: If you could turn to Page 8, please.

And if you could call out the slide first, just the whole slide.

Q. (By Mr. Skiermont) Mr. Caputo, this -- PTX-344, internal Sandvine training document, is entitled Introduction: Recognition Techniques.

Do you see that?

A. Yes.

Q. And the first -- and you agree it gives -- there's a bullet point series of different kinds of recognition techniques on this document -- or I should

say what's on this page?
A. Can you repeat the question, please?
Q. Sure. I won't promise it's a repeat, but I'll do as best as I can.
A. Okay.
Q. Is -- is the slide that's on the jury's screen a list of several different kinds of recognition techniques described in Sandvine's internal training document?
A. I'm going to say no.
Q. Is the first bullet point where it says Port Number, is it your testimony that that is not a recognition technique being identified in this document?
A. I suppose it's a very poor technique.
Q. And that's why the second sub-bullet, it says: Never use this.
Right?
A. Correct.
Q. Is another recognition technique that appears in this internal training document IP ranges?
A. Yes.
Q. And the first bullet under that says it's very unreliable, correct?
A. Yes.
Q. And is the third bullet on the jury's screen,

Regular Expression, another recognition technique identified in PTX-344, the Sandvine internal training document?

A. Yes.

Q. And is the fourth recognition technique identified on this slide a tracker?

A. Yes.

Q. And this particular -- this Sandvine internal training document says that a tracker is a stateful technique that monitors state changes within data and control flows, correct?

A. It says that, yes.

Q. And it also says that an analyzer is a tracker with complete protocol awareness, correct?

A. Yes.

MR. SKIERMONT: If you could turn to 16, please.

And if you could blow up just the whole slide, I think that would be great.

Thank you.

Q. (By Mr. Skiermont) Now, in PTX-344, Mr. Caputo, the title of this slide is Technical Requirement, Internet Traffic Classification, correct?

A. It is, yes.

Q. And the first bullet in this internal Sandvine

training document says: Before traffic identification can even be applied, a number of technical hurdles must be overcome, including first sub-bullet, tracking stateful protocols, second sub-bullet, associating related flows and sessions.

That's what this document states, correct?

A. It does.

MR. SKIERMONT: If you can turn to the next page, please, and call out the slide at the top, please.

Q. (By Mr. Skiermont) Deep packet inspection is a term that we -- you've heard today, correct, and that you know well?

A. Yes.

Q. And I think I've read you -- either in media or your deposition that you don't care for the terminology of deep packet inspection; is that right?

A. That's correct.

Q. And because you think that sounds nefarious?

A. Yeah, I don't think it puts the technology in the best light.

Q. Deep packet -- deep packet inspection technology, generally speaking, the -- does not require complete awareness of state of the flow, does it?

A. It does not.

Q. Sandvine's products do more than DPI, don't they?
A. They do more than deep packet inspection, yes.
Q. Mr. Caputo, when did you -- when were -- when were you no longer CEO of Sandvine and became non-executive chairman of the board?
A. Just -- September 21st of this year -- just five weeks ago.
Q. Few weeks ago?
A. Yeah.
Q. And what were your circumstances of your change from CEO to non-executive chairman of the board?
A. Sandvine was acquired. And as part of that acquisition, I was offered to become the chairman of the board.
Q. Are you -- are you an employee of the new company?
A. Insomuch as a chairman is an employee of the company, yes.
Q. Are you a non-executive chairman of the board or executive chairman of the board?
A. Non-executive chairman.
Q. And that means you don't have any operational responsibilities, correct?
A. That's right.

Q. You just have board responsibilities, right?
A. Yes.
Q. But you are the board of the new company?
A. I am.
Q. What's the new company called?
A. Sandvine.
Q. So -- so Procera bought Sandvine, and then y'all decided to make the name -- you took Sandvine's name?
A. Yes.
Q. And that closed September 21st, correct?
A. Correct.
Q. And so you no longer have decision-making responsibility for this litigation; is that right?
A. I would imagine that as stuff goes to the board, you know, they'll -- they'll be decision-making. Even as CEO, I would have thought that any -- any outcome of this, the board would be very well aware of.
Q. And so you'll continue to be involved, correct?
A. Yes.
Q. What about Mr. Bowman, is he part of the new company?
A. He is not.
Q. Is he no longer a Sandvine employee?

A. He is no longer a Sandvine employee.
Q. And is Sandvine no longer listed on the Canadian Stock Exchange?
A. That's correct.
THE COURT: Counsel, approach the bench, please.
(Bench conference.)
THE COURT: Where -- where is the relevance in all of this, Mr. Skiermont?
MR. SKIERMONT: I'm moving on. I just wanted to get the fact that he's not any longer the CEO. It was -- the first question of my examination, Your Honor, was -- was are you the CEO, and he -- and he said no. And so I just wanted to give context for why he was telling me he was no longer the CEO in answer to my first question.
THE COURT: There's a lot of words passed under the bridge from that first question until now. But nonetheless, how much more direct do you think you have of this gentleman?
MR. SKIERMONT: Not very much.
THE COURT: Okay. And I assume you're going to call Mr. Bergman as your damages expert next?
MR. SKIERMONT: Yes, Your Honor.
THE COURT: And do you intend to rest

after his testimony?

MR. SKIERMONT: I believe so, Your Honor.

THE COURT: What can I expect from Defendants as far as the case-in-chief? I'm trying to determine about the length of trial time we need to go tonight with this jury.

MR. GILLAM: I'm going to have questions for this witness.

THE COURT: I understand that.

MR. GILLAM: And that will probably take 20 to 30 minutes probably.

THE COURT: Do you expect to get your entire case on tomorrow?

MR. BURESH: I would say it's likely.

THE COURT: Can you give me some idea of what you anticipate?

MR. BURESH: We'll be putting on Don Bowman, the CTO that you've heard about, and we'll be putting on a technical expert and a damages expert.

THE COURT: Beyond that, do you have anything else?

MR. BURESH: There is a set of video depositions. I believe the total run time is about an hour --

THE COURT: Okay.

MR. BURESH: -- between the parties.

THE COURT: As you all are all aware, we had a time change this weekend, and it gets darker earlier. I'm -- I'm conscious of that with regard to the jury's travel time. So I'm just trying to get some idea of where we are.

Okay. Let's continue.

MR. GILLAM: Thank you, Your Honor.

(Bench conference concluded.)

THE COURT: Let's continue.

MR. SKIERMONT: Thank you, Your Honor. If you could pull up PTX-384.

Q. (By Mr. Skiermont) Mr. Caputo, you see the deposition sticker on -- on PTX-384?

A. I have it here in front of me.

Q. Yeah, so -- who is -- I just need to set the context for the attachment, that's all. Who is Howard Gillman?

A. Howard Gillman is an employee of Sandvine.

Q. And he is sending an email on May 28th of 2013 to someone from IBM, correct?

A. It appears he is, yes.

MR. SKIERMONT: And if you could now bring up PTX-385, please. And if you could blow up --

stop at Top 3. So from the top and then down to Top 3. There you go. Perfect. Thank you.

Q. (By Mr. Skiermont) Mr. Caputo, did Sandvine at one point have conversations with IBM about maybe supplying IBM possibly as an OEM?

A. I can't agree with the way the question was asked.

Q. Let me try it differently.

A. Okay.

Q. In this document, can you explain to the jury why under IBM's Service, it says Sandvine?

A. I believe -- and I might want to see the date of this, but I believe it was -- Sandvine was trying to get a global distribution agreement with IBM.

Q. And -- and this is a document that someone from Sandvine was sending someone to IBM, correct?

A. I mean, I have to take your word on it based on -- on the previous -- if you're saying that previous was the --

Q. You have the email. I didn't mean to interrupt you. I wanted to point out that you have -- PTX-384 is in your witness notebook if you want to take a look?

A. Yeah, 384 is just -- it looks like an email header with the subject: Catch up. And I'm assuming

you're saying this was an attachment in that email?
Q. I'm sorry, yes, I -- yes.
A. And so then I would assume that Howard was trying to sign up IBM as a re-seller for Sandvine.
Q. And Sandvine was providing some content in the attachment to that email which is what we have up on the screen, right?
A. Yes.
Q. And under Competitor 1 to Sandvine, it says: Cisco SCE.
Do you see that?
A. I do.
Q. What's a Cisco SCE?
A. A Cisco SCE, I believe it stood for service control engine, and it was Cisco's product for managing traffic.
Q. And is there a particular Sandvine product that competed with the Cisco SCE?
A. For some features for sure, yes.
Q. What Sandvine product was that?
A. I'm not super familiar of the full feature set of the Cisco SCE, but certainly some of the things that PTS would have done, the Cisco SCE would have done, as well.
Q. I'm sorry, you said PTS, right?

A. Policy Traffic Switch, if it's easier.
Q. Some of the things the Sandvine Policy Traffic Switch done -- does competes with some of the Cisco SCEs, right?
A. Yes, yes, sir.
MR. SKIERMONT: That's all I have. I'm going to pass the witness.
THE COURT: All right. Cross-examination by the Defendants.
Proceed when you're ready, Counsel.

CROSS-EXAMINATION

BY MR. GILLAM:

Q. Mr. Caputo, like the -- the jury did the other day, would you tell us a little bit about yourself, a little bit about your background, please?
A. Thank you. My name is Dave Caputo. I turned 50 this year. I've been married to my college sweetheart for 25 years this year. We have two boys, 21 and 19 years old. One of them is a sophomore and one is a senior in college.
Q. Does your wife work outside the home?
A. She does.
Q. What does she do, sir?
A. She's a school teacher. She teaches French and special education.

Q. What about your educational background?

MR. SKIERMONT: Your Honor, I'm going to object as beyond the scope.

THE COURT: Overruled.

A. I have a computer science degree from York University and I have a Master's of business degree from UFT -- the other UFT, the University of Toronto.

Q. (BY MR. GILLAM) Mr. Caputo, have you ever served on a jury?

A. I have not.

Q. You outlined for Mr. Skiermont what occurred on September 21st of this year, and that is an acquisition by Sandvine by another company, correct?

A. Yes.

Q. Okay. I want to take you back further and ask you where you worked before Sandvine came into existence, starting back in college?

A. Well, back in college, I had started a couple of companies. One was a water bottle company. When I went to university, I saw that in the big city, there was water bottle companies and that didn't exist in my small town, and so I went back and bought some water coolers, and rented them, and started delivering water or having water delivered to them.

And I also started a small business accounting

company where I would go to small businesses and install accounting systems for them. My customers were almost exclusively dry cleaners and butcher shops.

Q. After you graduated from college, who did you go to work for?

A. I went to work right after college for Hewlett-Packard.

Q. And how long were you with Hewlett-Packard and what was your job?

A. I was with HP for about six years, three years in Waterloo, where I met a bunch of my co-founders for Sandvine, and then three years in Colorado where both our boys were born.

Q. After you left Hewlett-Packard, who did you go to work for?

A. I joined some of what would be our eventual co-founders at Sandvine. They had started a company called PixStream, and so I went -- I went to join them during their startup.

Q. What kind of company was PixStream?

A. PixStream made video networking equipment. So if you remember -- remember in the early days, the only place you could get TV services were from your cable company or from a satellite company, and PixStream made video networking equipment to help phone companies

deliver TV services. So you know how today you can get your TV services from Verizon or AT&T delivering television services over phone lines, we made equipment that did that.

Q. Was PixStream even -- eventually purchased by Cisco?

A. It was.

Q. When was that?

A. It was December of 2000.

Q. Once Cisco purchased PixStream, how -- did you continue to work for PixStream within the Cisco umbrella?

A. I -- I became the managing director of Cisco's video networking business unit. So the general manager of their video networking business unit, and I did that for eight months.

Q. Eight months.

After eight months, what happened -- well, actually after four months, what happened?

A. Well, what happened was -- and Mr. Dietz spoke eloquently about it, of the Internet bubble bursting. And Cisco had a very, very bad quarter, and they decided to shut down a bunch of their recent acquisitions. And quite shockingly, they told us that they were shutting down their video networking business.

Q. What did that mean for you and the folks that you were working with?

A. It was -- it was the worst day of my life. I thought at the time I had to tell a team of 250 people who thought we were having a lot of success that -- that we're all getting laid off.

Q. After you got word of the layoff, did you go home, what did you do?

A. I did go home, and I went for a walk with my two boys. They were two and four at the time. And my cell phone rang, and it was Sir Terry Matthews, who was one of the early investors in PixStream. And he asked me what -- what -- what we were going to do next. And -- and I joked because it was a popular commercial at the time, I said we're going to go to Disneyland. And he told me that we had to start another company, that we knew how to build carrier scale equipment, solve real customer problems. We had to start another company because if we waited a year, all of the engineers would scatter to the four corners of the earth.

And I said to him, but, Terry, all the engineers got laid off today.

And he said, don't you have their phone numbers? And he -- he basically said that if we started another company, he would invest in -- in that company.

Q. Who did you contact after getting this call from Mr. Matthews?

A. I -- I did a conference call. It was a relatively new thing back then, on bridge, and I -- I contacted the co-founders of Sandvine, and I said, you wouldn't believe this crazy phone call I just got from -- from Sir Terry Matthews.

And I remember most clearly that Brad Siim, one of my co-founders, was already on a vacation in Hawaii when we -- when we got shut down, and he said something to the effect of, you know, Dave, I'm -- I'm here in Hawaii, and I can stay here for the rest of my life, but building a company with you guys sounds like a lot more fun.

And we decided that night that we would start another company.

Q. And was that other company -- or did that other company eventually become Sandvine?

A. That company was Sandvine.

Q. Who were the original founders of your company --

MR. GILLAM: Well, first of all, can we put up the demonstrative of -- I don't know what the number was, but it was the van.

There we go.

THE WITNESS: You remember it well.

Q. (BY MR. GILLAM) Who this -- who is this -- what is this a picture of, first of all?

A. This -- this was our very first day of operating as Sandvine. We unveiled the name, and those are the five co-founders of Sandvine.

Don Bowman, who you'll meet, I guess tomorrow or later tonight.

Tom Donnelly, who you just saw on the video.

And Marc Morin, who's at the front of the -- the van.

And Brad Siim, the person who was thinking about staying in Hawaii there under the bus, if you will.

Q. And that's you in the window?

A. A lot darker hair, I was a lot younger, a little bit heavier, I think, yes.

Q. So tell me, first of all, what was the general background of this group of guys? What -- what type of work had you generally been involved in?

A. We -- we had all been in the building and selling of networking equipment for the bulk of all of our careers.

Q. Okay. When you first got together with them, how long was it before you actually got together with

this group of guys and started brainstorming?

A. Well, Cisco had given us four months to wind down, the Cisco network business unit, and 12 hours later we started Sandvine.

Q. From the very beginning of your operation, was there a certain philosophy that you tried to create at your company? And if so, tell us what it was.

A. It was -- before our very first company meeting, the -- the day this photograph was taken, we got together the night before and said, look, we're a bunch of engineers. Why don't we engineer our culture? Why don't we come up with a way, a mirror we can reflect upon ourselves on the values we wanted our company to have? And we came up with this concept called the Sandvine Way. And I won't bore you with all of it, but there's eight tenets of it with things like customer first, we won't ever be successful unless our customers are successful. There was work hard, play hard. We were young. We wanted to work hard, but we wanted to have a lot of fun while we were working together. And then -- and then most importantly, I think was, do the right thing and everything else will take care of itself. The right answer at Sandvine is always to do the right thing.

Q. When you first got together and actually

started trying to put your company together, what kind of ideas were you working on? What were you -- what kind of products were you trying to come up with at the very beginning?

A. So what we did was we broke up into four teams, and over the next 14, 15, 16, weeks, we -- we evaluated a bunch of ideas. Each of the teams reporting to each of the teams what they had discovered, and over that time, we went from four teams to three teams to two teams to one team. And they were all in the networking space. We knew we wanted to do something carrier scale for big networks, and we wanted it to be something networking related.

Q. I think I've neglected to ask you this because with five guys, it would be hard to go from four to three to two. Did you actually hire other people, as well?

A. We did. We went back to the 250 folks, which were mostly engineers that were laid off. And we made offers to probably 30 or 40 of them, with maybe 20 of them starting the very next day. And then 10 a month later, and then 10 a month later after that.

Q. And those were the core group of folks that you whittled down from five to four to three teams and came up with your ideas?

A. That's right.
Q. The first product that Sandvine came out with, was that product successful?
A. It was not.
Q. Okay. What was it -- tell us a little bit about the first product.
A. The very first product was something called the -- you know, technology companies are terrible with acronyms, and it was called the global services engine or the GSE, but it was called the global services engine.
Q. And what was that about?
A. The idea we initially had for Sandvine was back in 2001, when we looked at our phone bills, we all saw we were spending more money on call waiting, call display, voicemail than we were on just phone access. And we thought, why wouldn't broadband evolve the same way that people would buy their Internet connection and then they would buy other services on top of it.
And so our initial idea was to build some subscription services that you would get on top of your Internet connection, things like anti-virus or firewall or -- or parental controls. That was -- that was one that we thought that we would be able to deliver via the service provider selling that as an add-on to their

Internet connection.

Q. But not successful?

A. It was not successful.

Q. Did you eventually transition into something called packet -- packet monitors?

A. The -- the next -- the very next product was something called our peer-to-peer element, or PPE, peer-to-peer element. And that was something that was going to help the service provider manage the congestion that was happening on their network for all the people. If you remember Napster back then or you heard BitTorrent earlier where people were downloading music and movies from each other, it was to help manage that traffic.

Q. Okay. Was that product successful?

A. No, it wasn't.

Q. Okay. Well, did you keep on trying?

A. Well, part of that -- that -- when we went to try to sell that product, the No. 1 question people would ask us was: Well, how much traffic on my network is peer-to-peer posturing? How much is -- because our BitTorrent -- not BitTorrent -- Napster, how much -- and -- and so we realized we needed a product where we needed to identify how much traffic was the type of traffic we were trying to manage.

And so that was the Policy Traffic Switch. That's how we got to the Policy Traffic Switch. And we -- I don't call it packet monitors, but I appreciate in this trial packet monitors is the words we're using.

Q. But Policy Traffic Switch is otherwise known as PTS, what we've been talking about here today.

A. That's right, policy -- I try to say Policy Traffic Switch, but PTS is -- if that makes it easier for everyone.

Q. When did your first Policy Traffic Switch come out?

A. The first PTS would have came out in -- we got started in 2001. I believe our -- our first sale of it was in 2003, so it would have been late 2002 or early 2003, somewhere in there.

Q. How would you describe Sandvine's growth over the years? I mean, from where you started with five guys to where it ended up, I guess at the time in September when it got sold?

A. So we went from five folks in 2001 to about 750 in September of this year.

Q. Okay. Are there some recognitions that your company has received that you're particularly proud of?

A. We've been very blessed. We've won many, many awards.

Q. Give us an example of a couple of them that you're most proud of.

A. Okay. Well, lots of technology awards. Well over 25 the last time I checked of stuff like best technology foresight and new products of the year. But the -- the awards I'm most proud of is 11 of the last 12 years, we've been named one of the top hundred places to work in Canada. And that makes me incredibly proud. And something put me over the top this year. Just March of this year, we were named one of the top 50 places for women to work in Canada. And I was -- I was very, very humbled by that award.

Q. In your opinion, Mr. Caputo, what's been the -- the key of the success of your company?

A. I really believe it's -- the culture we've created. We talk about the Sandvine Way all the time. We can call ourselves out on it whether we're embodying the Sandvine Way or not. It's been that culture that's driven a culture of innovation and resiliency and loyalty to each other for sure.

Q. What does the Policy Traffic Switch do from the perspective of the consumer?

A. Yeah, so our equipment is in these very large networks, but I -- I think -- I think the way it's been best described today is, you know, sometimes you get a

fast experience on the Internet and sometimes it seems slow. You know, when -- when it's slow, you get that buffering and that sort of thing. When Sandvine's in the network managing that traffic, we help you have a consistently smooth experience, consistently fast, consistently responsive experience when -- when it's used correctly.

Q. Who are your customers?

A. Our customers are people who build the Internet infrastructure and sell it to consumers, so cable companies who sell high-speed Internet, telephone companies that sell DSL or fiber connections, mobile operators like -- that deliver the Internet connection to your phone. It's anyone who delivers an Internet experience, satellite companies who do Internet over satellite. Those are all our customers. We have over 300 of them in a hundred countries.

Q. Does Sandvine have its own patents?

A. We certainly do.

Q. Both U.S. patents and foreign patents?

A. We do, yes.

Q. Okay.

MR. GILLAM: Could you pull up the exhibit -- I'm sorry, not an exhibit, a demonstrative there with the wall?

Q. (By Mr. Gillam) What is this a photograph of?
A. That's the hallway at the entrance of Sandvine. I recognize it from the green wall. And those are -- those are all Sandvine's patents that we have there. We -- we have a ceremony when -- when one of our engineers gets a patent, I hand it to them, and they -- at a company meeting, and we give them a financial award or some more shares in the company. And then we also make another copy of their plaque. They get one to take home, and the other one we put on that wall at Sandvine.
Q. Mr. Caputo, how did you first hear about this lawsuit that we're here about today?
A. The first I heard about it back on February 17th of 2016, was that I started getting all kinds of strange phone calls and voice messages from lawyers saying they'd like to defend Sandvine in a lawsuit that I had no idea what they were talking about.
Q. So lawyers would be calling you looking to try to represent you?
A. That's right.
Q. Now, to be clear, my law firm wasn't one of those ones calling and neither was the Erise law firm either, were they?
A. No. No, I don't think we -- we looked at any

of those companies that called.

Q. Okay. Had you even been served with lawsuit papers when you started getting these calls?

A. We had not. It was -- it was -- truly the first I heard about it was getting phone calls asking -- people asking if they could help us.

Q. Were you aware of any of these Packet Intelligence patents that we're talking about here today before they filed this case against you?

A. No, sir.

Q. Had you ever heard of Packet Intelligence before?

A. I had not.

Q. As the CEO of the company, once you did get sued, what kind of decisions did you have to make?

A. Well, I certainly wanted to understand what it meant to be sued for -- for patent infringement. I had to figure out who had been through it before, I had to figure out which -- which law firm to -- to help us out with it. I had to just really understand the situation, had to get the patents and take a look at them, that sort of thing.

Q. Mr. Skiermont asked you about it a few moments ago, but did you also talk to your CTO, Mr. Bowman, Don Bowman about it, as well?

A. Most certainly I did.
Q. What did you learn about it from Mr. Bowman?
A. Well, you know, that day I'm there, hey, let's -- let's try to figure this out. I imagine we're going to get served eventually here, but let's try to figure out which -- which patents they are. And I think he did some searches, and I think he found what he thought were the patents. We -- we, of course, eventually got served.
And I said -- I just asked him, you know, go -- go -- go spend some time, find out if we're infringing these patents.
Q. Okay. And based upon what -- based upon your conversations with him and the work that he did, did you make a determination as to whether or not you would -- would fight this lawsuit?
A. Well, after I spent some time talking to Don and he explained to me some of the concepts involved with these patents, we -- we certainly thought, well, maybe very naively, that this was going to be very quickly because we were going to be able to say we didn't infringe these patents, and we thought it would go quite quickly, but we were very naive.
THE COURT: Mr. Caputo, please refrain from using first names only.

THE WITNESS: Oh, I'm sorry, Don Bowman is -- is the reference, our CTO on all of those.

THE COURT: All right. Let's proceed.

Q. (By Mr. Gillam) When you were building your company, did you go from time to time to trade shows as a part of your company activities?

A. Yes. In the telecommunications industry, there's -- there's plenty of trade shows.

Q. And so did you attend them and your company attend them?

A. We did. Back -- back then a really big one was SuperCom in Atlanta, Mobile World Congress in Barcelona. There's just -- there's an endless amount of trade shows in this industry.

Q. Had you ever heard of Mr. Dietz or any of these other inventors prior to this litigation?

A. No, sir.

Q. Had you ever heard of a product called Meter -- MeterFlow prior to this litigation?

A. I had not.

Q. Had you ever heard of Packet Intelligence before this litigation?

A. No.

Q. Does your industry have publications, magazines, or blogs, or websites, or whatever that --

that actually track what's going on in the industry in which you work?

A. Yes, there's an endless amount of information on -- on the Internet on telecommunications, and publications like heavy reading, light reading, a lot of analysts. There's -- there's quite a bit of coverage in this space.

Q. Okay. Ever heard about -- or ever heard of the inventors, Packet Intelligence, any of that through any of these publications prior to this litigation?

A. No, sir.

Q. Mr. Caputo, if you are using someone else's technology, are you opposed to pay for the use of that technology?

A. I am not opposed to that, at all.

Q. In fact, in your job in your production of your products and what not, are there occasions where you use other people's patented technology?

A. There are plenty of patented technology in our products.

Q. Can you give the jury an example of some of those?

A. So we would license products from Intel, our chips and the software that go with it, Broadcom, as well, HP, some database software from them. A bunch of

little companies you likely would not have heard of, MicroStrategy, Sonic, our messaging bus. If somebody had done something before it makes it easier for us to get our product out. We -- we talk to them about putting their technology in our product.

Q. How does that process work, how do you -- how do you go about that? If you think someone else has already done something before you, you may need it to help, as you say, get your product out, how do you do it, what do you do?

A. Well, it happens one of two ways. One is we -- we do some Google searches and we find someone who has solved the problem who has a product they'd like to sell us and to incorporate in our product.

And then, you know, quite often, there's sales people in our industry who sell technology can give us a phone call or send an email. It quite -- it happens literally every day, every week, you get emails and phone calls of people who try to sell and license you technology.

Q. And if it's something that you find out that you need, you negotiate a license?

A. That's right.

MR. GILLAM: Pass the witness, Your Honor.

THE COURT: All right. Redirect?

MR. SKIERMONT: Very briefly.

REDIRECT EXAMINATION

BY MR. SKIERMONT:

Q. Mr. -- Mr. Caputo, I think you said that the first Policy Traffic Switch was sold in 2002 or 2003?

A. Yes.

Q. And do you know whether that model -- what's that model number?

A. The -- the first PTS would have been -- it would have been in the 8000s, probably 8210, PTS 8210, Policy Traffic Switch 8210.

Q. And are you -- were you aware that that model is not accused of infringement in this lawsuit?

A. I believe I'm aware of that, yes.

Q. The first -- the earliest product that is accused of infringement in this lawsuit was released when?

A. Can you -- can you share the model number of it?

Q. Was it 2006, does that sound right?

A. Does -- the PTS 14000, is that what it is?

Q. Let's look.

MR. SKIERMONT: If you could pull up -- if you could pull up PTX-339.

Q. (By Mr. Skiermont) Do you remember in -- the first time I asked you questions, Mr. Caputo, you were telling me about some Sandvine PTS products that compete with Cisco SCE products, do you recall that?

A. I do.

Q. And if you look at PTX-339, that's a Sandvine document, right?

A. It is, yes.

Q. And is it -- would you characterize this as a marketing document?

A. Yes, I would.

Q. And do you see there at the top, it says: Trade in your obsolete Cisco SCE 2000 series for the PTS 22050 from Sandvine?

A. I do see that, yes.

Q. When was the PTS 22050 first sold?

A. I honestly don't remember. It would have been our fourth PTS. I don't remember the dates on every single one of them.

Q. When you told me earlier when we were looking at that IBM document about Sandvine -- Cisco SCE, is -- are these the -- is the PTS 22050 the closest to the SCE 2000, or would there be another Sandvine product that competes with that one?

A. You know, all the -- all the different PTSs

with the numbers are essentially the same product, they're all the same software. It's just how fast one -- one hardware goes from the other, and so they could -- they could all compete, but, you know, this is probably one of the lower cost ones that we were trying to position against the Cisco SCE 2000.

MR. SKIERMONT: If you could pull up PTX-340.

Q. (By Mr. Skiermont) And PTX-340, Mr. Caputo, this is another Sandvine marketing document, correct?

A. It is, yes.

Q. And at the top there, do you see where it says: Trade in your obsolete Cisco SCE 2000/1000 series and upgrade to the PTS 22600 from Sandvine?

A. I -- I do see that, yes.

Q. And then below that it says: Considering moving to Cisco SCE 8000, correct?

A. Yes.

Q. Which -- which of the SCE models, 1000, 2000, 8000, is the closest to the PTS 22600?

A. I -- from this document, I would guess the PTS 22600 would be the closest to the SCE 8000. I'm sure it's very similar, bigger numbers, faster speeds, that sort of thing.

MR. SKIERMONT: If you could call out the

paragraph right above the -- the PTS 22600, right above. There you go.

Q. (By Mr. Skiermont) Do you see at the bottom sentence there, Mr. Caputo, in PTX-340, it says: In short, the PTS does everything a Cisco SCE 8000 does, and more?

A. I do.

Q. And do you agree with that?

A. I can't say I specifically know everything the SCE 8000 does, but I -- I would stand behind that as a marketing statement, yes.

Q. Mr. Caputo --

MR. SKIERMONT: You can take that down, please. Thank you.

Q. (By Mr. Skiermont) Does Sandvine, Mr. Caputo, when it sets out to make a new product or a new product line, is there any policy that Sandvine follows to determine whether there is intellectual property that such products might infringe?

A. Do we have a policy? No, we do not.

Q. So Sandvine does not have any procedures in place for intellectual property clearance, correct?

A. I -- I can't agree with that actually.

MR. SKIERMONT: Would you put up on the screen XZ10195.2? Actually don't put it up yet. Or

just find it, please.

Q. (By Mr. Skiermont) Mr. Caputo, we've talked about your deposition in May, correct?

A. Yes.

Q. And you were under oath?

A. I was.

Q. And you were striving to tell the truth in that deposition?

A. Absolutely.

MR. SKIERMONT: Please show the clip. It is 195, 8 to 12. There you go.

Q. (By Mr. Skiermont) Mr. Caputo, you were asked, question: What policies or procedures does Sandvine have in place for IP clearance purposes?

ANSWER: I don't believe we have any policies or procedure in place for such.

Were you asked that question, and did you give that answer under oath?

A. Yes.

MR. SKIERMONT: I don't have anything further for this witness, Your Honor. And I pass the witness.

THE COURT: All right. Additional cross, Mr. Gillam?

RECROSS-EXAMINATION

BY MR. GILLAM:

Q. Taking aside what's called IP clearance, if you're going to put out a new product, Mr. Caputo, what do you look at to make sure nobody else is doing it?

A. Well, you know, we -- we've come up with many new products, and that was my job at Hewlett-Packard. And it was my job at Cisco. And I would say generically what I -- I -- we -- I would do and what we would do is first, we will check to see if there's anyone else solving the problem that -- of the product that we're thinking of building, to see who our potential competitors were, or maybe if that market is already satisfied.

And then, two, we would look at what technologies there would be available to make it easier to develop the product. If someone's already figured out some -- some of the steps that we need to do before then, we would -- we would look at that.

And then finally, No. 3, and maybe most importantly, we'd try to understand the market. Is it big enough to support the level of investment that we would need to do -- to build that new product? And I think from that, we would -- we would determine what intellectual property is out there for solving the customer problem or for helping us solve the customer

problem.

Q. Okay. Tell the jury why you are fighting this lawsuit, Mr. Caputo.

A. I -- I -- I believe we've been falsely accused. And I believe that I owe it to the engineers who built this product to follow the Sandvine Way and do the right thing. And the right thing is not to pay for something that you're not using.

MR. GILLAM: Pass the witness.

THE COURT: All right. Redirect?

MR. SKIERMONT: No, Your Honor.

THE COURT: All right. You may step down, Mr. Caputo.

THE WITNESS: Thank you.

THE COURT: Ladies and gentlemen, we're going to take this time to recess for the day.

As you leave the courtroom, if you'll go through the jury room and leave your notebooks closed on the table in the jury room. I know we had a time change over the weekend. It's probably darker this time today than it was this time yesterday. I want you to please be careful as you drive to and from your homes.

Please be back in the jury room, as you were this morning, assembled and ready to go by 8:30 in the morning. Please also make sure that you follow all

the instructions I've given you, including not to discuss or communicate about the case in any way with anyone.

Be careful on the roads going and coming, and we'll see you in the morning. You're excused for the evening at this time.

COURT SECURITY OFFICER: Rise for the jury.

(Jury out.)

THE COURT: Be seated, please.

Counsel, before I bring the jury in in the morning, as is the Court's practice, I will ask both sides to have a representative prepared to read into the record from the podium the items from the list of pre-admitted exhibits that have been used during today's portion of the trial. So be prepared to do that before the jury comes in in the morning.

Also, I remind you if there are issues that arise overnight and the Court should be advised of any unresolved disputes not later that 10:00 p.m., and certainly if those disputes become resolved or narrowed over further discussions, you can supplement the notice to the Court, but those notices should not be later, to the extent they exist, than 10:00 p.m. this evening.

Also, I'll be in chambers by 7:30. If

there are disputes that do not get resolved overnight, I'll be available to take them up with counsel and to give you guidance in that regard.

Is there anything from Plaintiff before we recess for the evening? Anything further?

MR. DAVIS: Nothing further, Your Honor.

THE COURT: Anything further from the Defendants?

MR. GILLAM: Not from the Defendant, Your Honor.

THE COURT: All right. We stand in recess until tomorrow morning.

COURT SECURITY OFFICER: All rise.

(Recess.)

****

CERTIFICATION

I HEREBY CERTIFY that the foregoing is a true and correct transcript from the stenographic notes of the proceedings in the above-entitled matter to the best of my ability.

/s/Shelly Holmes _11/6/17_____
SHELLY HOLMES, CSR, TCRR Date
OFFICIAL COURT REPORTER
State of Texas No.: 7804
Expiration Date: 12/31/18